Lectures
ON THE
PHYSIOLOGICAL PATHOLOGY OF THE BRAIN.

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LECTURE I.—PART VIII.

ON A GREAT VARIETY OF FORMS OF PARALYSIS DUE TO DISEASE IN ONE SIDE OF THE BRAIN.

Hemiplegia may appear in both sides of the body, seemingly caused by a lesion in one side of the brain—Hemiplegia may appear with paralysis of the lower limb on the other side, seemingly caused by a lesion in one side of the brain—Hemiplegia may appear with paralysis of the arm on the other side, seemingly caused by a lesion in one side of the brain—Paralysis of one arm may appear with paralysis of the leg on the other side seemingly caused by a lesion in one side of the brain—Paralysis may appear in both arms, seemingly caused by a lesion in one side of the brain.

THE kind of paralysis I have till now spoken of is that which appears in one side of the body; I will now show that a lesion in one half of the brain can produce paralysis in the two sides of the body. There is certainly a very great tendency in the brain to produce hemiplegia or paralysis of one limb, especially the arm, as we see that even lesions occupying a considerable part of the two sides of the brain will in most cases give rise to a one-sided paralysis; sometimes, however, the reverse will take place, and we find that a one-sided brain-lesion will produce paralysis of the four limbs, or of three limbs, or of a pair of limbs (either the upper or the lower ones), or of an upper limb on one side and a lower one on the other side, or also of the face or the elevator of the upper eyelid on one side and of one or two limbs on the other side (the disease being above the pons Varolii). I will first speak of cases of general paralysis caused by a lesion limited to a part of one side of the brain.

6. *Hemiplegia may appear in both sides of the body, seemingly caused by a lesion in one side of the brain.*—I could find very good arguments in favour of this assertion in cases of general paralysis of the insane, apparently caused by a local disease, especially a tumour of the brain, but I prefer for the present to leave aside cases of that kind, and to deal with the ordinary forms of loss of voluntary movement. Out of the cases I have collected of disease in one side of the brain with paralysis in the four limbs, there are a number in which there was a considerable effusion of blood. I leave these cases aside, although I know that the pressure which the effused fluid may have exerted on the opposite side of the brain can have had but a small share, if any, in the causation of paralysis, as will be proved in another lecture. I will only mention cases in which pressure, either because it was not considerable or because it increased slowly, cannot be considered as the cause of double hemiplegia.

One of the most clear cases we owe to Dr. Chapotin de St. Laurent.* No other cause of paralysis was found in that case but an abscess of the left anterior lobe, having apparently produced an incomplete paralysis and anæsthesia in the two sides of the body.

In a case published by Vigla,† an accurate observer, there was also a lesion of one anterior lobe (the right), with paralysis and anæsthesia on the two sides, but the paralysis was greater on the left than on the right. In this case a complication existed, as there was meningitis on the two sides. No doubt it may be said that the paralysis and the anæsthesia were caused by this affection, and not by the effusion of blood and softening of the right anterior lobe. I do believe in the possibility that these symptoms arose from that cause, but if so the case disagrees just as much with the generally admitted view on the origin of cerebral paralysis as if the lesion in one anterior lobe had produced double hemiplegia.

Hébréard* relates a case of paralysis gradually increasing in all parts of the body in a person whose brain had no other alteration than that caused by a tumour the size of a hen's egg, between the fissure of Sylvius and the tentorium, on the left side.

In a case of my friend Prof. Charcot's† there were variable degrees of paralysis in the two sides of the body, more marked on the right than on the left, and in the arms than in the legs, the only cause being capillary apoplexy and softening of the left optic thalamus and of the left crus cerebri.

Many cases of disease of the pons Varolii and neighbouring parts show that a lesion in one side can produce paralysis in the four limbs. I have already mentioned two such cases put on record—one by Bretonneau, in which the lesion was extremely small; the other by Roger, in which there was a slight extension of the lesion beyond the middle line. Of other cases I will only hastily mention one published by Drs. Gairdner and Haldane,‡ and another by Ollivier d'Angers.§ Even a small tumour on the ganglion of the right trigeminus, hardly pressing on the pons and the crus cerebelli, has been found to be, in appearance at least, the only cause of paresis of the four limbs.‖ The same thing occurred in a case of J. Cartier's,¶ in which there was a tubercle pressing on the right corpus restiformis. As we know that hemiplegia due to a lesion in one side of the brain can appear in the same side or in the opposite side of the body, we can easily understand that the two effects—i.e., a crossed and a direct paralysis—can appear together in the same individual. This is what evidently occurred in the following case, published by an able man, Dr. Fabre.**

CASE 10.—Sudden loss of consciousness; complete paralysis of the *left* limbs; spasmodic rigidity of the *right* ones, followed by their complete paralysis, and return of consciousness. Brain, cerebellum, and spinal cord healthy. In the middle of the *left* anterior pyramid a yellowish mass the size of a pea, containing a blackish clot the size of a pin's head.

In this most important case, paralysis appeared first in the limbs on the side of the injury, which was not considerable enough to act on the other side. It is clear, therefore, that it was not owing to a loss of function of the diseased part that paralysis occurred. I need not answer the objection that perhaps there was no decussation of the anterior pyramids in the man who was so attacked, as, if we try to ground an explanation of the paralysis in the limbs on the side of the lesion on such a supposition, we do not remove the difficulty; we only change it, because the limbs on the opposite side were soon completely paralysed, and there was no other cause for the double hemiplegia than the lesion found in one pyramid. This case therefore shows in the most decisive manner that a small lesion of a part of one side of the brain, belonging only partly, if at all, to the voluntary motor tract, can produce paralysis in the four limbs.††

Against the value of these cases it might be said that there was in them another lesion—not found,—which was the true cause of at least the paralysis in one side of the body. Of course this is possible, but nothing proves that it was so, and it is very likely that it was not so in a number of those cases, especially in the facts observed by

* Bulletins de la Société Anatomique, Paris, vol. xviii., 1843, p. 187, et seq.
† Gazette des Hôpitaux, 1845, p. 419, quoted by Gintrac, loc. cit., vol. vii., p. 9.

* Bulletins de la Faculté de Médecine (Paris), May, 1876. Analysed by Abercrombie (loc. cit., p. 451), who, however, has neglected to name the author.
† Published in Poumeau's work, Du Rôle de l'Inflammation dans le Ramollissement Cérébral, Paris, 1865, p. 44.
‡ Edinburgh Medical Journal, 1861, p. 790.
§ Traité des Maladies de la Moelle Epinière, 1837, vol. ii., p. 300.
‖ Smoler in Ladame's work, already quoted, No. 155, p. 171.
¶ Bulletins de la Société Anatomique, vol. xv., p. 85.
** Thèse Inaugurale (Paris, 1832), p. 21, quoted by Gintrac, loc. cit., vol. vii., p. 373.
†† In my lecture published in THE LANCET of January last, I have shown that a *direct* paralysis does not, and cannot, depend on a lack of decussation of the anterior pyramids, as these parts of the medulla oblongata serve but very little, if at all, as channels between the will and muscles.

Fabre, by Charcot, and by Roger. But the value of those cases will be enhanced considerably when I show, in another lecture, that in every case that I have seen of disease in one side of the brain producing a complete hemiplegia, there was at least a slight degree of paralysis in the side supposed to be healthy; so that, although hemiplegia, as I have already said, is the ordinary effect of disease of the brain, either in one or in the two sides, there is a tendency to the production of a double hemiplegia—one of which, however, is extremely slight in most cases—when there is disease powerful enough to cause a complete loss of voluntary movement in one half of the body.

The power possessed by one half of the brain to produce paralysis in the two sides of the body is shown much more clearly by the facts I have now to mention than by those I have already spoken of.

7. *Hemiplegia may appear with paralysis of the lower limb on the other side, seemingly caused by a lesion in one side of the brain.*—In cases in which we find the occurrence of this double paralysis there is the coexistence of paraplegia with hemiplegia, the two symptoms apparently due to the same cause. Among the best cases of that kind that I have collected are the following:—

Ribes* records a case of meningeal hæmorrhage in which a large cyst, full of blood, and adhering to the dura mater, was found on the *left* hemisphere. There was a gradual diminution of sensibility and voluntary movement in the *two* lower limbs, and in the *right* arm.

Rostan gives a case† in which there was at first paralysis of the left leg, then of the right leg, and slightly of the left arm, apparently caused by a cancer and softening in the right, middle, and posterior lobes.

Romberg‡ relates a case in which there was at first *right* hemiplegia, and afterwards paralysis of the *left* leg. An old cyst was found near the surface in the *left* posterior lobe, and also on the same side a hardening of the cerebral matter near and in the corpus callosum. Besides, the *left* optic thalamus was considerably atrophied.

Mr. G. W. Callender§ gives a case in which there was paralysis of the *right* leg, but also and chiefly of the arm and leg on the *left* side. The centre of the *left* corpus striatum was found diffluent, so that there was *direct* hemiplegia (*left*), and *crossed* paralysis of one leg (the *right*).

The cerebellum, perhaps more than any part of the cerebral lobes, is able to give rise to paralysis of the lower limbs either alone or with a paralysis of one of the arms. I will only mention here two cases of this combination of hemiplegia with paraplegia. My eminent friend, Professor Vulpian,‖ has seen a case of thrombosis of the basilar artery with softening of the right side of the cerebellum. There had been paralysis of the two lower limbs and of the right arm. It may be that some lesion existed in the pons Varolii able to help in the production of paralysis in this case; the consistency of the tissue of the upper left half of that nervous centre was diminished.

Marcé¶ has published a case of an hæmatic cyst in the right lobe of the cerebellum, which caused titubation, retrograde movement, and an incomplete paralysis of the two lower limbs, and a complete paralysis of the right arm.

When we remember that a paralysis can appear either on the side of a brain lesion or on the opposite side, we find it easy to admit as having really existed what is stated to have been observed in the various cases I have just mentioned—i. e., a direct and a crossed paralysis, in the same individual, have been caused by a lesion in one side of the brain.

The same thing exists also in the kind of paralytic manifestation of which I have now to speak.

8. *Hemiplegia may appear with paralysis of the arm on the other side, seemingly caused by a lesion in one side of the brain.*—The two cases of lesion of one of the posterior lobes which I have already mentioned,** and which we owe to Mr. Callender, are excellent to establish that paralysis of the two arms and of one leg can appear from a lesion seemingly limited to one side of the brain.

A case like those two has been recorded by Récamier and Trousseau.†† There was a large abscess in the right posterior lobe which first produced an incomplete paralysis of the *right* arm, and two days after *left* hemiplegia.

In these cases, like those previously given, a *direct* paralysis seems to have been caused, together with a *crossed* paralysis, under the influence of a lesion in one side of the brain. We find the same thing again in the cases that I have now to speak of.

9. *Paralysis of one arm may appear with paralysis of the leg on the other side, seemingly caused by a lesion in one side of the brain.*—This is the kind of paralysis called transverse; it is not exceedingly rare when due to two lesions, one in the left and the other in the right side of the brain, but notwithstanding my efforts to find cases in which a lesion of one side only of the brain had produced this transverse paralysis, I have only collected three or four. The best, perhaps, of these few cases is one of Peyrot's,‡‡ in which the *left* arm and the *right* leg were paralysed, apparently from the influence of a lesion of (a tumour pressing against) the *left* side of the pons Varolii and the *left* crus cerebelli.

In a case of Dr. Barker's§§ there was paralysis of the *left* arm and of the *right* leg, with softening of the *left* lobe of the cerebellum.

In both these cases the arm was paralysed on the side of the lesion, and the leg on the opposite side.

In the cases I will now mention there was also a direct and a crossed paralysis, but the paralysis was either only in the arms or only in the legs.

10. *Paralysis may appear in both arms, seemingly caused by a lesion in one side of the brain.*—It is extremely remarkable that when paralysis attacks but one limb it is three times at least out of four the upper one, while when it attacks three limbs it is much more frequently the two lower ones and one of the upper ones, than the two upper ones and one of the lower ones. Besides, it appears very much more frequently in the two lower limbs alone than in the two upper ones. Facts are indeed scarce in which either lesions in the two sides of the brain, or in the one side only, have caused paralysis in the two upper limbs and not in the lower ones. In a case published by an excellent observer, Dr. Dance,‖‖ there was an almost complete paralysis of the arms and neck. The lesions found consisted in small effusions of blood in many convolutions of the left cerebral hemisphere, and of two ecchymoses, the size of a lentil, on the surface of the right hemisphere, and two others on the cerebellum.

In a case very much like that of Dance's, there was paralysis of the two arms and of the neck, apparently caused by patches of inflammation in the convolutions of the left posterior lobe; but there were also traces of the same affection on the right posterior lobe.¶¶

In two cases of tumour pressing on one side of the medulla oblongata, a paralysis of the upper limbs only has also been observed.***

In another case of tumour which sprang from the right optic thalamus, both arms were alone paralysed for a long time.†††

Lassone‡‡‡ has also recorded a case of tumour between the right parietal bone and the brain, with paralysis of the two arms.

In the case of Professor Charcot's, which I mentioned a moment ago, there was, at times, chiefly a paralysis of the two upper limbs, especially the right, and no lesion was found but in the left optic thalamus and the left crus cerebri.

In those cases there was both a *direct* and a crossed, and so it was in the large number of cases of paralysis due to a lesion in one side of the brain, which I will now mention.

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* Revue Médicale, Paris, Janvier, 1832, p. 34.

† Traité du Ramollissement du Cerveau, seconde édition, Paris, 1827, p. 133.

‡ On Diseases of the Nervous System, translated by Dr. Sieveking, vol. ii., p. 424.

§ St. Bartholomew's Hospital Reports, vol. v., Case 61, p. 8.

‖ In a good paper of Dr. Hayem, in Archives de Physiol., vol. i, 1868, p. 280.

¶ Comptes Rendus de la Société de Biologie, 1862, p. 251.

** See THE LANCET, August 19th, 1876, p. 248.

* Gazette Médicale de Paris, 1834, p. 601.

† Bulletins de la Société Anatomique, vol ix., 1834, pp. 137, 246.

‡ Medical Times, vol. iv., p. 30.

§ Archives de Médecine, vol. xxviii., 1832, p. 325; quoted by Gintrac, loc. cit., vol. vii., pp. 7, 8.

‖ Copeman on Apoplexy, p. 57.

¶ Choisy, in Bulletins de la Société Anatomique, Paris, 1833, vol. viii., p. 19. (In this case the paralysis was greater in the left arm than in the other, the tumour pressing on the corresponding side—the left—of the cerebellum and medulla oblongata.) Pinel, quoted by Ladame, loc. cit., p. 43, No. 1.

** Mr. W. C. Clough, in THE LANCET, 1833-34, vol. ii., p. 149.

†† Quoted by Serres, Anat. comparée du Cerveau, vol. ii., p. 676.

ON BURNS BY GUNPOWDER AND SCALDS BY STEAM.

BY INSPECTOR-GENERAL SMART, C.B., R.N.

IN a paper read before the British Medical Association meeting of South Hants, I related some observations on these points. Of the former category I dealt with twenty-one cases that occurred during our occupation of Canton in 1857, of which six proved fatal on the seventh, tenth, fifteenth, seventeenth, eighteenth, and thirtieth days respectively. I then detailed cases typical of the organic sequences that involved fatal results on the seventh day by meningitis, on the eighteenth by dysentery, on the thirtieth by exhaustion of nervous power with blood-poisoning, ending by ischuria, and one on the seventeenth by erysipelas attacking the head and face. I supplemented this by the details of a case that recovered, in which the primary violence was equally severe, but where these sequences were absent, and where constipation had been a characteristic of great prognostic value, as in all other favourable cases. The constitutional treatment was on the general principles observed in treating these complications when they present themselves idiopathically. The local treatment through all the cases was, in the first stage of depression and of inflammatory reaction, by carron oil on cotton wadding; in the second stage of suppurative action, attended by more or less sloughing, by oxide of zinc powder and by calamine ointment; and in the granulating and cicatrising stages by the same applications as in the suppurative; but when the granulations became pale and flabby, by strips of lint covered with resinous ointment containing an excess of turpentine. It was gratifying to find in the end that over two-thirds of them—all very severe burns of the head and face, with more or less of both upper and lower extremities—recovered.

Then exemplifying the subject of scalds by steam, by those that lately happened in the *Thunderer* explosion, I stated that out of thirty-four vigorous men who were in the stokeholes, only two remain alive, and, in addition to these, eleven have since perished who were not so near to the exploded boiler. In all about eighty persons were involved, of whom forty-five have perished by an explosion of steam and hot water that burst the boiler with the force of a thirty-five ton gun, scattering huge masses of iron, tons of boiling water, and volumes of steam, together with dense fumes from the extinguished fires. After an hour the living, fifty-eight in number, followed by nineteen corpses, reached Haslar Hospital. Of the latter fifteen had been brought up dead from the stokehole, and four had expired in the passage to the shore. Of the living, the majority were very severely scalded, but only one had received mutilation—of an ankle-joint, dying in four hours. Within thirty hours eleven others had succumbed to primary shock. Some of them were semi-comatose and little sensible to pain, others, after attempts to rally, became delirious, rolling heavily from side to side, and suffering from strangury, and stripping the dressings from their flayed limbs; breathing heavily, and vomiting. Those who survived the shock felt relief from scorching agony in thirty-six to forty-eight hours, gaining fitful sleep, passed excretions, and some asking for animal food. Possibly steam-scalding of fauces and of primary air-tubes, in those who died of the so-called shock within thirty hours, was the lesion of most fatal import. The stage of reaction for suppurative effort was attended by internal congestions and inflammatory action in the brain and along the gastro-enteric track, with their characteristic symptoms. Under such conditions six perished on the fifth, sixth, eighth, and ninth days from injury. On the tenth day there remained alive forty-four, of whom twelve have died, twenty-seven have been discharged, and five remain under treatment (September 12th).

One of these last cases, J. D——, was severely scalded by steam over the head, face, and neck, in the air-passages, and over the arms and hands. He had been exposed to the first rush of steam up through the casing of the funnel, and 350 square inches of his surface had been denuded of its cuticle or covered with large vesications. On the sixth day all his unscalded surface was of a lurid red colour. He then became delirious, and had frequent fits of moaning, which lasted till the eleventh day, when he again answered coherently; but from the fifteenth to the twentieth he was again delirious, yet after that he recollected for the first time that he had been on board the *Thunderer*. In the meantime he had severe ophthalmia that had ulcerated both cornea, the left irrecoverably. On the twenty-second day he complained of dysphagia, when the fauces were found sloughy and aphthous, and at the end of the fourth week gastro-enteritis afflicted him till the thirty-second day. On the fortieth day the kidneys were excreting bile pigment, sp. gr. 1046, which state gave way to deposits of urates, phosphates, and, later, oxalates. He is now convalescent with, however, left staphyloma, and a few cicatricial contractions.

In another case that is recovering, the patient was scalded by steam to the extent of 400 square inches. He has had no signs of meningitis, but from the suppurative stage he has had attacks of gastric irritation, and that also of the kidneys, to the extent of excretion of albumen with broken blood-discs.

Such have been the two worst of the cases that have barely evaded the dangers which others have, only less in degree, gone through. In all, the results of nervous shock are well-marked in lowered courage and in dread of the past, from which time alone can restore them.

Sloughing of the deeper integuments has been rare compared with that in gunpowder burns, wherein delirium is of earlier access. On the other hand, early deaths from shock have been more frequent than in those burns, which may be attributed to the greater surface involved causing nervous depression, from which the reparative powers could not rally.

A scientific observer who had been witness of the results in two great magazine explosions remarked to me that 80 square inches of inflamed surface induced fever with danger to life. To test this assertion, I set a painstaking officer, Dr. Burke, to make approximate measurements of the scalded surfaces in twelve cases remaining in the seventh week. He found it, in square inches, to have been 198, 213, 232, 265, 283, 345, 355, 363, 377, 398, 477, and 766, giving an average of 356 square inches excoriated or vesicated. Of these the men now under treatment gave 198, 355, 363, 398, 477. All these had two points in common—the severity of the scald on the face and head, and sloughs, leaving indolent ulcers, on the arms, in which the new cuticle was very thin. The lowest, 198 square inches, was in the oldest man injured, aged fifty-three, who had a heavy struggle through the febrile reaction. The figures 355 belonged to the extremely dangerous case of J. D——, already detailed. The highest, 766 square inches, is altogether exceptional, as he could not have survived had the whole of that surface suppurated, much of it drying under the vesications. In him the scald was over nearly one-third of his surface. He is one of the two remaining who were in the stokehole, and he escaped into a coal-bunker, from which he was drawn insensible.

The questions of viability as dependent on the extent of surface involved, which determines the degree of shock, and again on the depth of tissue injured as taxing the reparative powers, are worthy of more precise observation. Perhaps in those who did not survive primary shock, the scald of the respiratory track, as well as that of the skin, precluded rallying; while in those who fell later, the depth, more than superficial extent, proved fatal, which may explain also a higher mortality from the sequences in gunpowder explosions than in severe scalds not directly fatal. I would view 350 square inches, the mean of these measurements of scalds, and 250 square inches of surface burnt by gunpowder, as equally fatal injuries.

As to the treatment. Until decided signs of rallying, it was by stimulants, with sago and beef-tea, anodynes of opium and chloral hydrate, chloroform to allay irritation of the stomach, and the use of the catheter. After rallying, beef-tea and animal food, where appropriate, were given night and day. Lime-water with milk was given to allay irritability of the stomach. On and after the third day, laxatives were given when required to relieve constipation, which was a most auspicious sign throughout, as animal food was then well borne, and the healing process went on rapidly. In treating internal complications, general therapeutics were observed. In those of the air-passages there were favour-

able results in the congestive stage, and pneumonia developed only in two cases, both fatal. The meningitic symptoms were beyond special treatment, and yet two such recovered, and several also in which delirium had been present. Gastro-enteritic symptoms ran high, but subsided more readily than the meningitic with the establishment of suppuration, but there were instances of recurrence at a later stage, in which one died with coffee-ground vomit. The renal disturbance was generally checked by alkalies and nitric ether. Great nervous prostration caused anxiety as leading to syncope, which was the mode of death in more than one instance in the suppurative stage.

The local treatment was by oil and lime-water on cotton-wadding on every part to the fourth and fifth days, and later, in the majority, on the limbs. This being found inconvenient on the face, head, and neck, it was changed for a wash over with carbolic oil (1 to 10), then dusting on it from a common flour-dredger a powder, consisting of one of oxide of zinc, one of magnesia, and two of powdered starch, sifted on wherever moisture appeared, care being taken to keep free the facial orifices. It formed a mask to the features, excluding the atmosphere. Under its protection the process of "scabbing" went on favourably, and, the crusts detaching, the scalds were found healed, except sometimes on the pinna of the ear, where abscesses gave trouble. In one case only is there any permanent deformity by cicatrices on the face, so that I think it applicable also in confluent small-pox. It was used also on some sores on the limbs, the forearms, and hands with success. Although only a mode of excluding atmospheric air, yet its claim is for simplicity and readiness of application. The treatment by oil and lime-water was in general disused before the tenth day; and when the above was not employed, it was substituted by a liniment of carbolic acid and olive oil (1 to 20) on lint under oil-silk, retained by bands of Lister's gauze, which, although locally successful, was not found free from a suspicion of irritating the kidneys.

To maintain the highest possible degree of atmospheric purity, almost every known deodorant was used; but preference was given to the process of Dr. Goolden, of disengaging chlorine, insensibly, from a mixture of nitrate of lead and common salt in solution, sprinkled on the floors from watering-pots, and on sheets hung round the offensive beds.

Very much has been due to the efforts by careful personal attention of the surgical staff, under the guidance and responsibility of Deputy Inspector-General Loney; for by them the duties, however humble, have been performed in a zealous spirit, regarding solely the welfare of the sufferers.

EXOPHTHALMIC GOITRE.

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WITH our limited knowledge of the physiology and pathology of the nervous system—a system which presides as the directing (originating?) force of every organic function—it is not by any means a matter of surprise that the unsolved problems of practical medicine should be so very numerous.

If it be the case, as indeed I think may fairly be assumed, that the initial cause of our every disorder or disease is to be found in some disturbance of the force above referred to, then may we well watch with an all-absorbing interest those investigations as to nerve-functions which our experimental physiologists are now pushing forward with so much ability, earnestness, and labour; for, until a larger amount of accurate knowledge, a greater weight of stable facts, a more determinate and determinable collection of positive information than we at present possess as to the effects of nerve-function, and the correlation of each special nerve-function on the purposes of *nutrition*, are placed within our reach, a correct interpretation of the phenomena of disease, and with this our ability to successfully treat disease, must necessarily be impeded—may be definitely obstructed by our ignorance.

How much is implied in the frequently-repeated expression—"some error of nutrition"—and yet how little do we know of that force which creates and regulates nutrition. What knowledge have we of the several divisions into which the process of nutrition may be separated? Who can say whether that same much-talked-of "error of nutrition" lies in nutrition as a whole, or whether the "error" is dependent on a defect in some particular part of it? Is nutrition regulated by special trophic nerves not yet demonstrated, as first surmised by Samuel,* and subsequently supported by Duchenne, Bärensprung, and others of the same school of thought, or is it carried on independently of any such a system of trophic nerves, by the ordinary nerves of so-called organic life, thus making the nutritive integrity of tissues dependent chiefly on the nerves concerned in their several ordinary functions, as the observations of Vulpian and Phillipeaux would seem to indicate? All important questions these—so important indeed that until satisfactorily answered, our recognition of the causes of disease must inevitably be clouded and uncertain.

Can it be denied—I do not think it fairly can—that the facts of physic are comparatively few? And if so, then assuredly we should not be blind to this other fact—viz., that whatever the study of medicine may have hitherto taught us as to the general characters of disease, it is as nothing when compared with what we have yet *to learn* as to the essential and primary causes.

What do we know, for instance, of the *cause* of cancer? Recent discussions on cancer have been, it is thought by many, admirable in their fulness and lucidity. Descriptions of its every variety have been elaborated; the morbid appearances of various structures faithfully detailed; histological conditions graphically pourtrayed: but all this was only an oft-told and well-known tale; whilst it would seem to me to have been more desirable that the effort should have been directed rather to discover the *cause* of cancer than to describe its *characters*. The question should have been, I think, not, what is cancer, but what *occasions* it? And here might not disturbed nerve-function, in the matter of nutrition, step in to help us solve the problem?

Every organ, every tissue, must, in virtue of its own inherent force (nerve-function), attract to itself the necessary *elements* for its own maintenance and restoration. A simple error in point of *quantity*, if correct in *quality*, might lead only to hypertrophy, or the production of some homologous or analogous growth; whereas an error in the selection of the elements themselves, an error as to *quality*, would lead, it may be imagined, to the formation of a heterologous product. Just as some seeds sown in a soil not ordinarily their habitat display characters and possess qualities not originally theirs—characters and qualities not common to their ordinary nature; so *elements* not suited to the parts requiring maintenance and restoration may, in like manner, lead to a growth that shall prove destructive to the tissues in the midst of which it is situated.†

We know that cancer, as a rule, appears usually at that time of life when nutrition is difficult of adjustment, and when the balance is, so to speak, easily upset. Now, as a *local* excitant, a blow on the mammary gland might serve, by disturbance of nerve function, as the determining cause of such an error in nutrition as would in some instances, it may be supposed, lead to the *local* selection of *improper elements*, and thus produce a "nidus" eventuating in cancerous and destructive formations. This, however, is but a mere thought in passing.

Again, what positive knowledge have we as to the cause of that distressing condition now called, apparently by common consent, "exophthalmic goitre"? The first description of this affection, I suppose, may be fairly attributed to Demours, in 1818, and Galezowski‡ claims for this authority such pre-eminence; but still the affection has received many names in honour of the person who has been supposed to have first noticed and described it. It has been spoken of by Stokes as "Graves' disease," and Emmert gives the credit to Basedowi.§ But by whomsoever first noticed, it does appear something more than strange that so very peculiar, so distressing, such an absolutely frightful collection of symptoms, should have re-

* Trophischen Nerven. Leipzig, 1860.
† Malignant tumour is formed of a collection of substances which are a new growth in the human body—of abnormal substances which do not exist in the body of the living man.—Dr. G. Buchanan.
‡ Etude sur le Exophthalmique, Gaz. des Hôp., 1871, p. 428.
§ Historiche notiz über Basedowi, nebst Referät über 20 selbst beobachtete Fälle dieser Krankheit. Arch. f. Ophthal., xvii., 203.

mained unnoticed, or, if noticed, unreferred to, until about the period before mentioned. From the very long silence that was maintained, one feels tempted to believe that the malady could scarcely have occurred in times very long gone by, and if such really be the case, *then* Dr. Richardson might claim it, and properly claim it, as one of the "diseases of modern life." That it is intimately associated with those marvellously intricate nerve conditions termed emotional is, I believe, a pretty generally well-grounded opinion, and certainly for many years past the rate of living of all classes, the excitement attendant upon all that we do, say, or are connected with—the strain, in fact, put upon all our feelings is so great, that "strung up" (if I may use the expression), as the whole nervous system continually is, to a pitch far beyond that which is healthy or natural, may well lead to some unhinging of one or more particular parts of it.

Whilst a typical case of this disease necessarily includes the three phenomena of protruded eyeballs, enlarged thyroid gland, and disturbed circulation, yet here, as with other diseases, some of these symptoms may be absent or but imperfectly displayed, and yet the affection, though not present in its entirety, may exist in its *essence*. To such an extent is Trousseau impressed with this idea that he goes so far as to say that you may have instances of the disorder in which there is neither disturbed circulation, protrusion of the eyes, nor enlargement of the thyroid gland.* Well, it is a trite saying that you may have the play of *Hamlet* with the principal character omitted, but that you can have that play with *all* the characters left out is calling rather too largely upon the imaginative powers.

It seems to me to be incorrect, and liable to mislead, to call the affection "exophthalmic goitre" unless there be at least the two conditions present from which it derives its name; for unquestionably you may have "goitre" pure and simple, or you may have an exophthalmic state without any goitre whatever, and you may also have, and frequently do have, in hysterical females and others with highly pronounced and excitable emotional feelings, a strongly marked and peculiarly disturbed state of the circulation, not resulting from any absolute alteration of organic structure, but affording nevertheless bruits, murmurs, and thrills, without there being present either goitre or protruded eyes; yet, to apply to such cases the name of "exophthalmic goitre" would be manifestly improper, neither appealing to our scientific knowledge nor recommending itself to the requirements of a correct nomenclature.

The foregoing observations in no way militate against, or interfere with, the well-known circumstance that this morbid entity has no one settled and unvarying way of commencement and progression. It has no particular period of incubation; it may begin insidiously with feelings of languor and depression, with evident symptoms of mal-assimilation. Or it may occur without any prodromata whatever, and in the most sudden manner. As an instance of this suddenness, a case has been recorded† in which the whole phenomena of the disease—exophthalmos, goitre, and disturbed circulation—were all created and fully developed in a single night, there having been previously no indication whatever of the approach of such an ailment; and there are other recorded cases in which the suddenness of invasion has been equal to if not exceeding this.

So likewise with regard to the order in which the special symptoms appear, there is nothing invariable. The disturbed circulation may precede the enlargement of the thyroid and the exophthalmos; the goitre may precede the other two symptoms, or the exophthalmos may be the first to make itself evident. And, indeed, speaking as I am doing of that state which is not a resultant of alteration of ultimate organic structure, but simply in the first instance a disturbance of function, I think I may venture to say the mode of attack is uncertain and erratic.

As regards the kind of persons who are generally most prone to suffer from the complaint, the rule is that it is the highly nervous and emotional, although, even in this respect, there have been exceptions somewhat numerous; and whilst it is far more usual, as might be expected, for females to be attacked than males, yet men enjoy no absolute immunity. In the several cases I have seen, and in all those cases I have read of, and which have been typical in their character, the two eyes have protruded *equally*, but the thyroid has not preserved this symmetry of appearance, the right side of the gland being almost invariably the larger of the two.

Over and beyond the above spoken of uncertain manner of attack, it is well to bear in mind that cases do occur which are accompanied by, if they are not actually the product of, alterations of organic structure, and still further it is believed that, in some instances, cases which have in the first instance commenced as merely the effect of disturbed function, have subsequently culminated in organic disease.

(To be concluded.)

* Trousseau's Clinical Medicine, Syd. Soc. Trans., vol. i., p. 558.
† Gaz. des Hôp. 1863, p. 390.

A SUCCESSFUL CASE OF TRANSFUSION.

BY VICTOR A. WARTENBERG,
SENIOR HOUSE-SURGEON, MANCHESTER ROYAL INFIRMARY.

INASMUCH as cases which are so desperate as to call for transfusion as a last resource are so rarely successful, I wish to record one that has lately occurred at this hospital.

On the 22nd day of July last Mr. Hardie, one of the assistant-surgeons, in the absence of Mr. Bowring, amputated through the middle third of the thigh, in a youth aged twenty-two, for old-standing strumous disease of the knee-joint. The operation he performed was one he describes as an "oblique circular," or a circular operation with the anterior portion of the integument cut longer than the posterior, so that, when healed, the cicatrix is at the back part of the stump, and not directly over the end of the bone. The vessels were secured mostly by catgut ligatures, but the supply of these having failed a few hempen ligatures were used. The patient progressed favourably until the separation of the last hempen ligature, when secondary hæmorrhage set in. This was checked by elevation of the limb and by the application of cold. Three days afterwards hæmorrhage, much more profuse, supervened, and this, too, was arrested after some difficulty by the injection into the wound of the muriated tincture of iron. The next morning, however, about 11 o'clock, I was summoned in haste, and found the patient bleeding profusely from the unhealed portion of the stump. A tourniquet was applied as quickly as possible, and an attempt was made to find the bleeding vessel, but at that time the youth was pulseless, perfectly blanched, and the heart's action was almost imperceptible. I gave him as much brandy as I could get into him, applied hot bottles and blankets, and sent for Mr. Hardie, who kindly came at once, and found the patient in the condition I have just described.

Mr. Hardie determined to try transfusion, but with a very faint prospect of success. While preparations were being made for the operation he opened up the stump, and passed a needle carrying a wire through the skin, and underneath some tissue which appeared to contain the bleeding vessel, bringing it out again at the same opening in the skin. The wire was then twisted over a pad of lint, and pressure thus made on the vessel. One of the resident pupils of the infirmary, Mr. H. Irvin, very generously volunteered to supply the blood. It was intended to practise immediate transfusion by means of Dr. Aveling's instrument, but its action not being satisfactory it was discarded. A pint of blood was collected and defibrinated by passing it twice through a fold of muslin. The total quantity was thus diminished by about four fluid ounces. The remaining fluid portion was then slowly injected by means of an extemporised apparatus into the largest visible vein in the patient's arm. It was observed that the blood would not flow freely into the vein until the latter was tied round the cannula with a fine ligature. Precautions were taken throughout the proceedings to maintain the blood at its normal temperature by immersing the vessels containing it in boiling water.

Immediately the operation was concluded, the pulse became a little stronger, but the patient did not entirely recover from the state of collapse for nearly a couple of hours, when he recognised those about him, and was able to speak to them.

The next morning his temperature rose to 102·4°, but fell

again towards evening, and after that he made a good recovery without a single bad symptom.

The wire which was used to compress the bleeding vessel was untwisted thirty-six hours after its application, and withdrawn at the end of a week.

The patient was transferred to the Convalescent Hospital at Cheadle on the twenty-fourth day after the transfusion.

ON CHRONIC ULCER OF THE STOMACH.

BY JOHN RICHARD WARDELL, M.D., F.R.C.P.,
SENIOR PHYSICIAN TO THE TUNBRIDGE WELLS INFIRMARY.

(*Continued from p. 394.*)

THE kind of ulcer now described is very rarely of the acute, but nearly always of the chronic form; and it is generally single; there may, however, be two or three, or even a greater number, but such instances are exceptional, and when there is a plurality of them they are generally situate near each other, most frequently at the posterior surface and at the pyloric end. Nor is it an uncommon thing to detect the cicatrices of similar and foregoing places of lesion: these indications may be a mere trifling loss of the villous coat or white lines; or there may have been such an amount of destruction of the mucous and muscular coats as to have left a puckering-up and an irregular folding of the walls, and when such places are viewed on the peritoneal aspect the serous membrane is to be observed crumpled and wrinkled, or in radiating or stellate lines. It is thus that in extreme instances of this kind of contraction the shape and contour of the organ may become very greatly or even fatally altered. The internal surfaces at some particular point may approximate and only leave a tortuous and contracted passage, and thus the patient may finally sink from sheer inanition; and such event, it may be remarked, is nearly always at the pyloric portion of the stomach. Again, this resulting approximation of the parietes, by producing contraction of one part, is apt to render the remainder of the organ sacculated or largely and unsymmetrically distended, and thus an abiding condition of discomfort and impaired health are the inevitable consequences. And with such changes, violent cardialgic pains are common accompaniments.

The cause of gastric ulcer and the site which it elects have, and justly, been held in disputation by pathologists; nor is it to be wondered at that there should be a want of consentaneousness of opinion relative to those questions, because, as in many other problems arising out of the lesion of internal parts where neither ocular demonstration nor direct experiment can be brought to bear, as in the investigation of diseased structures where the morbid phenomena can be observed, such is necessarily left to vague hypotheses and individual ways of thinking. Some have asserted that the first cognisable change in the gastric surface is a slight and demarcated shrinking of the mucous coat, with more or less of vascularity in the subvillous tissue; and their descriptions have inclined to the notion that the initiative and fundamental alteration is of a congestive and inflammatory kind, whereby the nutrition would necessarily become affected. Such, however, rather belongs to those generally entertained doctrines which ascribed so much in the causation of most diseases to an origin of inflammation; but these views, with a profounder, a more exact, and demonstrable pathology, are now considered untenable. Virchow regards the first condition in the process of this affection as an arrestment in the circulation through a sufficient depth of the gastric tissues as to allow the destructive power of the gastric juice to be exerted on such part, when the blood is there deprived of its naturally opposing quality—that is, its normal alkalinity; and, in confirmation of this notion, ligature and embolism of the gastric arteries have shown that under such obstructive circumstances the solvent action of the gastric juice will dissolve not only dead portions of the stomach wall, but also parts which are not necrosed but whose vitality is lowered. In favour of this theory it has also been remarked that these ulcers are more liable to be located in that part of the digestive canal which lies above the reach of the alkaline bile. It has before been insisted upon that the ailment now considered is most liable to occur in the chlorotic and cachectic, in whom there is blood-lesion, and consequently a lowered vitality, as more particularly taking place when there are derangements of nutrition during puberty; and hence it is doubtless a localised effect of the want of normal vitalism in an organ in which the nerves proper to such part are implicated, and thus the degraded change spoken of, which renders the otherwise resistive tissue a prey to the gastric acid. As Wilks and Moxon remark, the cause of this ulceration may be somewhat analogous to the cause of ulceration of the cornea, which comes on in a debased state of the system and a general lowering of its vitality. We know, as already observed, that embolism in the liver, spleen, brain, and other organs is followed by circumscribed decay; and, by a parity of reasoning, embolia in the arteries of the stomach may be followed by a like phenomenon. It has, however, been pointed out, in opposition to this theory, that in many cases of broadly diffused embolism of other organs embolism of the stomach has not been found. Virchow, however, believes embolism to be the most frequent cause; and he also thinks that obstruction in the portal veins, fatty degeneration of the arteries, and mechanical injury sustained by the vessels in vomiting, are prominently to be enumerated. And thrombosis and the atheromatous and amyloid changes may doubtless be added as primary and remote causes. This high authority also comments on the fact that the configuration and position of these ulcers incline to the notion of their being primarily of arterial origin, and that their conical form resembles what occurs in embolism in other parts.

All authorities agree that gastric ulcer is most frequently found at the posterior surface of the organ, and next in frequency of its site is the lesser curvature and at or near the pylorus, for which it seems to have a sort of elective affinity. As already remarked, it is very seldom observed on the anterior surface, the greater curvature, or the cardiac end. Some have endeavoured to account for this election of the pyloric portion and smaller curvature by the greater fixity of the organ at this part, and thus its increased liability to irritation; but such would hardly explain the peculiarity. We know that carcinoma is far more prone to appear at certain parts of the alimentary canal than in other portions of its course, and that in the vast majority of instances it is detected either at the pylorus, the ileo-cæcal valve, the sigmoid flexure, or the rectum, and that the intervening spaces possess comparatively an immunity. In other organs and tissues we know there is a kind of preferential caprice in their lesions which is difficult of explanation. It is, perhaps, much dependent upon vaso-motor influence. The diameter of these ulcers varies from a quarter of an inch, it is said by some, to the extent of a space equal to the palm of the hand. From my own experience I should say they are by far most commonly noticed from the size of a fourpenny-piece to that of a half-crown, and, when larger, very probably two or three have coalesced. They are mostly round or ovoid, and only sometimes of irregular outline, and when noticed from the inner surface they have a punched or stamped appearance, the outer edges being smooth, clearly defined, and as if vertically cut. Within they are funnel-shaped, the cone pointing towards the serous membrane, and if more minutely examined when they have become chronic and when absorption has taken place, their interior often exhibits, as I have already said, a kind of crater-like or terrace formation. The margins may be greyish, pale-red, or brown, and sometimes small dark coagula are adherent to their borders. The edges, as a rule, are well defined, and there the submucous tissues may be rendered thick, harder than normal, and more or less elevated above the surrounding surface. The ulcerative process is sometimes discovered to have so far progressed as to have extended fully down to the serous covering, when the thin peritoneal coat alone maintains the integrity of the organ, and thus life is imperilled by the occurrence of some trifling or fortuitous circumstance, whereby a rent in this attenuated tissue might be effected, such as a slight blow, a full meal, or straining at stool. When the serous coat thus gives way,

as in the instance recorded, the opening looks like a clean-punched hole without any fringing or lapping at the edges. Sometimes the peritoneum, after having been denuded of its coverings from within—a condition which first takes place in the centre of the cone,—becomes vascular, opalescent, and at length a yellow slough is formed, which either partially separates spontaneously, or is partly or entirely displaced by some extra exertion, sudden distension, or slight mechanical force in some other way applied, and thus perforation is effected. When the ulceration is on the posterior aspect of the stomach, and the peritoneum becomes irritated, lymph is thrown out on the free surface of the membrane, and agglutination with some neighbouring organ or structure may eventuate, as to the left lobe of the liver, the pancreas, the omentum, spleen, or certain lymphatic glands. And the result of this may be, and not very unfrequently is, conservative, by preventing the extrusion of the contents of the stomach into the great serous sac, and thus ushering in a fatal catastrophe. The fibro-cellular formation in the course of time may impart a thickness to the organ to which such union has taken place, and such organ be in no otherwise affected. But pathological changes of a different kind may eventuate. This union having come to pass, circumscribed peritonitis is the consequence, and the partially inflamed peritoneum is rendered over a greater or less area vascular, tumid, and adherent. It may give rise to inflammation of the diaphragmatic pleura, and thus symmetrical pleuro-pneumonia may be established at both bases, and all the ordinary phenomena of the physical signs be rendered present. The morbid coalescence to internal parts spoken of may be only temporary, as the neoplastic connective tissue may after a time give way; it may become soft, absorbed, and lack the power of organisation, and thus rupture has only been for a time warded off, and not permanently prevented. The effused product, however, may assume the characteristics of a fibro-cartilaginous substance when the blocking up of the breach of continuity is effectually secured. It is a curious pathological sequence, and one which has been commented upon, that in this disease, when the ulceration has extended through the serous membrane, it takes on a suppurative tendency, when the matter may burrow through the diaphragm into the thoracic cavity, where it has been known to be followed by a gangrenous condition of the pulmonary substance; or it may, in seeking an outlet, penetrate some part of the intestinal tube, or pass through the abdominal wall, and thus establish gastric fistula. It is possible that diffuse and flagrant peritonitis may be set up, when the intestines and solid organs have been found matted together, and the entire serous membrane revealing all the usual conditions of its ordinary inflammation. Such, however, in these cases is exceptional, because the blood is not such as to readily give off the commonly seen effusive products, and because such inflammatory phenomena as take place are of the asthenic type.

Perforation is much more likely to occur when the ulcer is on the anterior aspect of the stomach, as in the case narrated. When there situate there is less chance of adhesions, as the mobility of the diaphragm and the abdominal walls opposes this kind of union, and its occurrence in this position is necessarily fatal. The cause of death in such event may be from the sudden shock which the system sustains by an outpour of ingesta and gastric fluids into this great cavity; or the place of opening may happen to lacerate one or more arterial branches, and the hæmorrhage be such as at once to destroy; or diffuse peritonitis, as before remarked, may be instituted. In the eruption of such an amount of extraneous products, the great splanchnic nerves, and the cardiac plexus in especial, may become so gravely impressed and subdued as speedily to arrest the heart's action; and more likely would such be the case in a patient who had long suffered from this disease, and who was perhaps debilitated by previous losses of blood. Again, in such an instance the hæmorrhage is favoured by the already existent blood lesion, and that defibrinated state to which the vital fluid has been reduced, and thus a less outpour may be fatal than in other cases in which hæmatemesis is produced from other causes. It may not inaptly here be remarked, when there is solution of continuity of the peritoneal covering of the stomach in cancer the process is slow, most rarely sudden, and very exceptionally so as to allow of the extrusion of the contents of the organ. In malignancy the growth may destroy the diaphanous investment, but this destruction is a gradual process, and the effused product solders up an orifice which would otherwise be fatal.

(To be concluded.)

CASE OF HYPERTROPHY OF THE SPLEEN; DISORDER OF THE RESPIRATORY AND DIGESTIVE ORGANS; SPLENOTOMY; RECOVERY.

BY M. J. PÉAN,

SURGEON TO THE ST. LOUIS HOSPITAL, PARIS.

(From Notes translated by WILLIAM E. ROWLATT.)

THIS case of splenotomy performed by M. Péan brings the total number of operations of this kind upon record up to six. Of this number two only have been performed by M. Péan, the first in 1867, a short description of which will be found in THE LANCET of July 22nd of the present year; the second is the case that forms the subject of the present communication. The four remaining observations, we believe, are due to MM. Küchler, Spencer Wells, and Kœberlé; but, strange to say, all have been unsuccessful except the two due to the Parisian surgeon.

Mrs. D——, twenty-four years old, well-developed, has no trace of hereditary disease or of syphilis; married at seventeen, before she menstruated. Had been confined four times: twice at nine months, both children dying shortly after birth; once at seven months, the child dying; and lastly, a miscarriage at four months. Had only seen catamenia eight times in seven years. She first became aware of the existence of her tumour eighteen months before the operation, and since that time it had developed itself with great rapidity. At this period her appetite diminished considerably, and she frequently vomited after some slight exertion. She was also troubled with a slight cough. In the month of February the tumour occupied nearly the whole of the abdominal cavity. It was hard and movable to the touch, and sprang from the left hypochondrium and descended to the pelvic cavity. No ascites.

In the month of April, at the time of the operation, the tumour had considerably augmented in size. The abdominal walls were greatly distended, but were still movable over the tumour, and were not the seat of any vascularisation. The surface of the tumour did not present any depressions, and was uniformly smooth. It was somewhat elliptical in shape.

Operation (April 25th).—An incision was made from eight centimetres above the navel to within six centimetres of the pubes. The peritoneum was then incised, and the tumour exposed. The intestines and epiploon, drawn to the right of the tumour, were maintained in the abdominal cavity by means of heated compresses. The tumour was then drawn gradually through the wound, and a ligature was placed round the hilum, which contained some very large vessels, especially a splenic vein of the size of the index finger. This being done the tumour was excised above the ligature. Nearly a litre of blood flowed from the spleen after the section, otherwise the loss of blood was insignificant, and may be estimated at about thirty grammes. The pedicle was brought to the superior extremity of the wound, which was then closed by a simple suture.

April 26th.—General condition satisfactory. Pulse 85; temperature 37·6° C. Has no pain. Urine red, owing to the presence of some red globules.

27th.—Temperature a little above normal. Urine less red. Strips of gauze saturated with collodion placed on the wound.

May 2nd.—Pedicle came away. The last points of the suture were taken away. A small abscess has formed where one of the sutures was placed, and has been incised. Patient very cheerful; appetite excellent.

13th.—Patient up for the first time. Sleeps and eats well. Wound very nearly healed.

22nd.—Quite well, and allowed to return to her home.

Since this last date the patient has continued to do well,

and has not had any bad symptom; and she is now (August 25th) able to continue her occupation.

The tumour, emptied of blood, weighed 1125 grammes. Its longitudinal diameter was 0·22m.; transverse diameter 0·12m.; thickness 0·08m. It was nearly of the consistency of the liver, and was difficult to tear. The hypertrophy was found to be parenchymatous.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GREAT NORTHERN HOSPITAL.

RUPTURE OF POPLITEAL ARTERY.

(Under the care of Mr. W. HARRISON CRIPPS.)

AT 2 P.M. on June 19th, W. W——, aged twenty-one, was walking down-hill by the side of a heavy waggon, one wheel of which was locked. He fell down with the lower part of the right thigh under the fastened wheel. In this position he was dragged a short distance, but the wheel did not pass over the limb. When admitted into hospital, half an hour later, he was in a state of collapse, with a cold moist skin and feeble pulse. From this condition he soon rallied.

On examination of the injured limb there was a small superficial wound over the patella. The foot and lower portion of the right leg were colder than those of the opposite side. The limb above the knee was much swollen. No pulsation could be felt in either the anterior or posterior tibial artery.

On the afternoon of the following day the foot and rather more than the lower half of the leg were of a dull-red colour, fading into a deep yellow three inches below the knee. The foot was cold and quite insensible, and no pulsation could be detected in either of the tibial arteries. The loss of sensation and the coldness ceased about half an inch below the livid line. From the knee to Poupart's ligament the whole thigh was greatly swollen, hard, tense, and elastic to the touch. After a careful examination no thrill or pulsation could be detected in any part of the swelling. The femoral artery was felt beating with a jerking pulsation just below Poupart's ligament, but its pulsation could be traced for only a few inches down the thigh. The patient had passed a restless night. Temperature 103°; pulse 130.

June 25th.—No sleep at night. Wandering delirium at times. Temperature 104·1°; pulse 126. The foot had become much darker, and was distinctly gangrenous. The swelling of the thigh did not seem to have increased, but felt very hard. With great hesitation, the patient consented to have the limb amputated. At three P.M. (forty-nine hours after the accident) the limb was removed in the middle of the thigh by antero-posterior skin flaps. A couple of turns of an india-rubber tube made an effectual tourniquet. The subcutaneous tissue was infiltrated with blood and serum, resembling a dark-coloured jelly. On making the circular incision through the muscles, a pint or more of dark fluid blood escaped. The patient was very delirious for some hours after the operation, but became quieter towards night. At 9.30 P.M. the pulse was 120, and the temperature had fallen to 102·4°.

22nd.—Slept at intervals during the night. Towards morning had a good refreshing sleep of some hours. During the next four or five days the pulse continued at about 100, the temperature ranging between 101° and 103°.

After July 1st the temperature had fallen below 100°. There was a good deal of sloughing of the anterior flap. With this exception the patient advanced steadily towards convalescence, and was able to leave his bed by the 20th July.

Examination of the limb after removal.—The popliteal space was filled with dark fluid blood, and the surrounding structures were all stained of a deep-claret colour, which rendered the recognition of them very difficult. On tracing down the popliteal artery it was found completely torn across just above its division, the ends being separated an inch and a half. The calibre of the last inch of the upper portion was so contracted as scarcely to admit a small probe, but did not contain a clot; the sheath, drawn out and terminating in a fine point, projected an inch beyond the vessel and contained a soft coagulum. The lower portion, containing a small soft clot, had also retracted some distance within the sheath, but its calibre was not much diminished. The nerves were uninjured. The tibia near its upper end was partially fractured, the line of fracture being oblique, and involving about half the thickness of the bone.

It may be remarked that rupture of the popliteal artery from violence, without external wound, is not an unfrequent accident. The mechanism of this lesion would appear to be the result of a force acting in an oblique direction from below upwards, on the lowest part of the femur. Dr. S. Pozzi, of Paris, in an interesting paper on rupture of the femoral artery (Bulletins de la Société Anatomique, 1868), has called attention to the frequency of the rupture of an artery just above the giving off of some large branch. Many authors have noticed the same fact. A reasonable explanation would be that the vessel, being drawn upwards, gives way just above the point of greatest resistance, the resistance being offered by some lateral branch. The case reported is a good example of this, the popliteal artery giving way just above the origin of the anterior tibial.

Judging from the records of this accident, amongst which should be mentioned twenty-seven cases reported by Poland in the third series of Guy's Hospital Reports, it would appear that the symptoms depend mainly on the extent of rupture, and that the treatment must vary accordingly. The entire absence of pulsation in a rapidly formed and diffused swelling of the ham and thigh, the total cessation of the pulse in the anterior and posterior tibial arteries, and great coldness of the limb, would indicate complete rupture of the artery, with contraction and plugging of its ends. On the other hand, a pulsating swelling in the ham, more or less pulsation in the tibial arteries, and the maintenance of the natural warmth of the limb, would point to a partial rupture. In such a case the artery would be still pervious to the flow of blood, a portion of which passing along the natural channel would keep up the circulation in the leg, while part escaping through the rupture in the artery would communicate its pulsation to the extravasated blood in the limb.

Four lines of treatment have been suggested and practised:—1. Pressure. 2. Ligature of the femoral artery. 3. Ligature of the vessel at the seat of rupture. 4. Amputation. In case of complete rupture, it is difficult to conceive that any good can result from the employment of either of the first two methods. Circulation in the leg has already ceased, and pressure or ligature of the femoral obviously cannot restore it. Respecting the application of a ligature at the ruptured point, it should be remembered that the stoppage of circulation in the leg may in some measure be due to pressure of the extravasated blood on the collateral vessels. If the limb were not already cold, free incision might possibly allow the collateral circulation to be re-established, and gangrene thereby averted. This treatment was tried in two cases, by Guthrie and Travers respectively, but in neither case could the injured vessel be discovered. Guthrie's patient lost the limb by gangrene. Travers's patient died of secondary hæmorrhage. In another case Poland tied both ends, but gangrene and death followed. Experience has proved that amputation affords the best chance of life, and should undoubtedly be performed as soon as gangrene has declared itself. Most authorities agree that it is useless to wait for the establishment of a line of demarcation.

In cases of partial rupture there is much less tendency to gangrene. As the circulation is not entirely cut off, some hope of saving the limb may be entertained. Carefully adjusted pressure on the femoral has succeeded, and should be first tried. Of ten cases in which the femoral artery was tied, five recovered with useful limbs, while five died from gangrene. Some of these deaths might probably have been prevented if amputation had been performed immediately after the appearance of gangrene, but no further operation was done in any of the five cases. According to

Pelletan, the proportion of recoveries when an attempt has been made to tie the vessel at the wounded spot is rather more favourable than the above. But the great difficulty so often experienced of finding the vessel, owing to the disorganised state of the parts, the large extent of the necessary wound, and the risks of secondary hæmorrhage, would doubtless in many instances lead the surgeon to try a ligature low down on the femoral rather than attempt to find the wounded vessel. Unfortunately, gangrene may follow either of these operations, and the limb has to be removed. But if the amputation be performed immediately on the appearance of mortification, the chance of life cannot be seriously diminished by the previous operation and attempt to save the limb.

STANLEY HOSPITAL, LIVERPOOL.

COMPOUND FRACTURE OF THE JAWS; WIRE SUTURE.

(Under the care of Mr. RUSHTON PARKER.)

A BOY, aged twelve, was brought to the hospital on Sept. 4th, 1875, having, half an hour previously, fallen about six feet into a neighbouring sandstone quarry, some of the loose stones of which were displaced and fell with him, crushing and injuring his head and face. There was moderate bleeding from the right ear, the left cheek was raw from abrasion, and the lower lip was split and ragged all over the red margin. The facial surface of the left upper jaw was obviously sunk below its proper level backwards, its front teeth and their alveoli were driven in and broken, and a perceptible difference of level could be felt between the halves of the hard palate. The lower jaw was broken through on the left side at the first bicuspid tooth, the fragments being much displaced and exposed in the mouth by laceration of the gum, the direction of the fracture being oblique downwards and backwards.

In about an hour later the lower jaw was drilled and wired, the upper jaw being disregarded, as it was quite firm in its depressed position. By this time there had occurred intense ecchymosis of the eyelids and great pallor of the uninjured parts of the face, while in addition the increased redness and rawness of the left cheek gave him altogether a somewhat frightful appearance. He was still bleeding from the ear, and had a very feeble and quick pulse, but he was quite conscious and free from pain.

Before the bone was fixed the tooth at the seat of fracture was withdrawn. Two drillings were made, one in front of, and the other behind, the fracture, both being directed at a level below the dental canal, to avoid its contents. In drilling the anterior fragment the lower lip was turned down, the bone and gum being alone pierced; but in the case of the posterior fragment the hole had to be made behind the angle of the mouth, so the cheek and bone were pierced together, and the wire passed through both; the wire was then picked up from inside the cheek by incising the mucous membrane under which it lay, the hole in the cheek being then done up, and left to heal. The wire was passed through one hole from outside and returned through the other from inside, and to effect the latter movement a tubular needle was passed from outside and withdrawn, after inserting the end of the wire into its tip. Each end of the wire was then twisted into a cylindrical spiral coil between the cheek or lip and the bone by means of a steel rod, with a slit at the end to catch the tip of the wire, which was thus held fast and coiled round the rod until it was tight enough. Perfect apposition was thus infallibly attained. The next day the steel rod, or key, was inserted into one of the coils and turned to secure tightness, but no further interference was required.

The bleeding from the ear ceased within a few hours of the accident; the boy was kept in bed about a week, and fed on liquid diet for a fortnight, during which time he enjoyed his nights' sleep, and tolerable immunity from pain and discomfort. No dressings of any kind were used, and the only subsequent treatment employed was frequent ablution. The wire was cut in the middle, and withdrawn after twenty-six days, firm union having existed about ten days. An abscess formed in the cheek, and left a sinus leading to bare bone; but this was all healed in ten weeks after the accident. He lost the left upper canine tooth, and the three adjacent incisors with their alveoli; and the left lower second milk molar was replaced by a permanent bicuspid.

The steel rod or "key" for coiling the wire, and other tools required in similar cases have been devised by Mr. Hugh Owen Thomas, of Liverpool, and fully described and illustrated in his pamphlet, and in THE LANCET, vol. i. 1867, p. 79.

Mr. Parker's attention was first drawn to the "key" by Mr. Berkeley Hill, who used it when wiring a jaw which he had divided for the removal of a tongue at University College Hospital in 1869.

This is obviously the simplest, neatest, and most efficient treatment of compound fracture of the lower jaw which has been yet devised, and is satisfactory to both patient and surgeon alike. The instruments employed were made by Krohne and Sesemann, and the ordinary copper wire of bell-hangers (about one-thirty-second of an inch thick) cannot be surpassed for the purpose.

NORTHERN HOSPITAL, LIVERPOOL.

DOUBLE FRACTURE OF INFERIOR MAXILLA; WIRE SUTURE.

(Under the care of Mr. CHAUNCY PUZEY.)

EDWARD S——, a seaman, was brought to the hospital on July 3rd, having sustained a double fracture of the lower jaw. One fracture was compound, between the right canine and bicuspid teeth; the other simple, oblique, a little anterior to the angle on the left side. The injuries had been received in a fight whilst the man was drunk. As the case proved difficult of treatment, the patient was admitted into hospital. Various methods were tried, but all found more or less ineffectual; the fragments could be with some difficulty placed in good position, but it seemed impossible to retain them, the muscles of the tongue and floor of the mouth very soon displacing the anterior fractured portion, and causing great pain. Therefore on the 13th, ten days after the injury, the operation recommended by Mr. H. O. Thomas was performed. The anterior fracture only was wired. The bicuspid tooth having been extracted, the drill was passed through each fragment at the reflection of the mucous membrane, about three-quarters of an inch from the fracture, and the fragments were wired together by the copper bell-wire coil, as described in Mr. Rushton Parker's case. The posterior fracture was not touched, but to assist in steadying it an ordinary four-tailed bandage was afterwards applied. Nothing further was required. All pain and trouble ceased, as evinced most remarkably by the change in the patient's temper and manners.

On the 4th of August he became an out-patient. There was by that time no mobility at the seat of the anterior fracture; but as there was some slight pain on movement about the situation of the posterior fracture, and as the suture did not cause the slightest inconvenience, the wire was not removed. He did not attend regularly after his discharge, but was seen by Mr. Farnell, the house-surgeon, on the 19th August. The fractures appeared firmly united, and he was told to come next day to have the suture removed. He did not do so, and when inquired for a few days afterwards, it was found that he had gone to sea, having probably been engaged during the intervening time in spending his spare cash in drink. However, there could be no doubt that the operation had resulted quite satisfactorily, both from a surgical point of view and as regarded the comfort of the patient. By this operation, the heat and discomfort of bandages, the trouble of rearranging appliances, and the necessity for keeping the jaws fixed, are avoided—a source of relief both to patient and surgeon.

COMPOUND COMMINUTED FRACTURE OF SUPERIOR MAXILLARY BONES; WIRE SUTURE.

(Under the care of Mr. CHAUNCY PUZEY.)

A dock labourer, aged twenty-eight, was admitted into the hospital on Jan. 12th, 1876, suffering from severe comminuted fracture of both superior maxillæ. Whilst at work at a crane he had been overpowered, and the winch-handle, revolving rapidly, had struck him in a direction from below upwards on the mouth, grazing the lower lip, shaving off the crowns of all the lower front teeth, and smashing or

knocking out all the upper incisions and canines. All the alveolar portion of the right superior maxilla posterior to the canine tooth was hanging down on the tongue, suspended by the mucous membrane of the hard palate; the bony palate was fissured from before backwards, the floor of the antrum was comminuted, so that the finger passed readily into that cavity; the finger could be passed from each nostril into the antrum of the corresponding side, and crepitus could be felt under each orbit, both maxillary bones being evidently fractured vertically through their whole extent. The large detached portion was brought up into position, but it was necessary to remove several pieces of antrum, which lay in such a position as to interfere with its reduction. The two portions of right maxilla were then drilled at a level with the reflection of mucous membrane, about three-quarters of an inch from the line of fracture, and were then fixed together by two thicknesses of stout silver twisted suture. The line of teeth then corresponded accurately. Wine and fluid nourishment, and frequent syringing of the mouth and nose with Condy water, was the after-treatment.

For a day or two there was some sanious discharge from the nose and mouth, and in the course of a day or so later profuse purulent discharge from the nostrils; swelling and discolouration of the whole of the face occurred, the eyes being completely closed, and the face presenting the appearance of erysipelas, or rather of glanders. There was, however, no constitutional disturbance, and the condition was evidently due merely to extravasation of blood.

Ten days after the injury the swelling was fast disappearing, but the large fragment of bone was found loose, and it was seen that the suture had given way at the twist. This was removed, and a thicker wire was passed, which remained firm until the termination of the case.

Four weeks after the accident all swelling of the soft parts had disappeared, and there was much less mobility of the fracture. In a week or two more the patient was about to be discharged as an out-patient when great swelling of the *left* cheek and palate suddenly occurred, and in a few days an abscess opened itself into the mouth, and shortly afterwards a small fluctuating swelling was opened just below the left infra-orbital ridge. A small quantity of air and pus escaped from this opening, and through it a probe could be passed into the antrum, and bare but not loose bone detected at a considerable depth.

On the 18th of March the man became an out-patient. There was still slight mobility at the site of the principal fracture. The wire suture was therefore left in; in fact, it was not removed until June, for it appeared to cause no irritation or annoyance, and it was thought that, in consequence of the great loss of bone, osseous union would be but slight.

In July a small fragment of bone was discharged from the opening below the left orbit, and the sinus, which had remained open with slight intervals for four months, closed.

On the 28th of August he was well. There was no deformity except from the loss of the teeth, and a slight gap in the alveolus at the site of the principal fracture. The line of the jaws was perfect. He was transferred to the care of the dental surgeon, for the purpose of being provided with false front teeth.

THE SANITARY GOVERNMENT OF LONDON.

THE Annual Report of the Metropolitan Board of Works that has just appeared is a document interesting to all concerned in improving the sanitary condition of the metropolis. The Board has now been constituted twenty years, and has during that time effected a vast number of improvements, that are assisting very materially to make London, although the largest, the healthiest city in the world. The chief works undertaken by the Board have been the main drainage scheme, resulting in the comparative purification of the river, the Thames Embankments, collectively about five miles in length; the re-arrangement and maintenance of nineteen parks, commons, and open spaces, in which are included Finsbury-park, Blackheath, and Epping Forest; and the supervision of all roads and buildings with reference to the formation and closing of streets, and regulating their lines of frontage. The Artisans and Labourers' Dwellings Act has also increased considerably the duties and responsibilities of the Board, and its members have lately been engaged in framing bye-laws as to slaughter-houses, necessitated by a special Act on that subject passed two years ago. It may be remarked that in this last duty they have received much assistance from the metropolitan officers of health, as well as from experience gained in Liverpool and other large towns. The water-supply of London has, as all readers know, recently engaged much official attention, but the time does not yet appear ripe to abolish the existing companies, and hand over the entire work to the Metropolitan Board. We may predict, however, that even this event some few years hence is by no means improbable. We have reviewed this Report mainly for the purpose of recapitulating the action that had up to the end of the past year been taken by the Board under the provisions of the Artisans' Dwellings Act. This Act received the Royal Assent on the 29th of June, 1875, and since that date ten representations have been officially made by the medical officers of health attached to the Holborn, Whitechapel, St. Marylebone, St. George-in-the-East, St. George the Martyr (Southwark), Islington, St. Martin's-in-the-Fields, Clerkenwell, St. Luke's (Middlesex), and Bermondsey. Two only of these have as yet been dealt with—viz., those of the Holborn and Whitechapel districts. The former, presented by Dr. Septimus Gibbon, treats of a district in the immediate neighbourhood of Gray's-inn-road, and as the sub-committee appointed by the Board agreed with the medical officer that re-arrangement and reconstruction were absolutely necessary, a scheme was eventually approved which comprises an area of four acres, and will provide for the construction of not less than 950 tenements, affording unitedly accommodation for not less than 3500 persons, "or seventy more than the estimated number of the working class which will be displaced."

The second official representation acted upon by the Board was made by Mr. J. Liddle, medical officer of health for Whitechapel, and refers to an area in the neighbourhood of Dock-street and Upper East Smithfield. This area is covered almost entirely by courts and alleys, and the scheme adopted by the Board will provide for the construction of not less than 1077 tenements, affording accommodation for 3600 persons, or 60 more than those to be displaced. As, in the prosecution of the necessary inquiries, the Committee experienced considerable difficulty in ascertaining accurately the number of the resident population, as well as other important particulars, the Board has caused to be addressed to every medical officer concerned a series of questions, intended to elucidate the condition of the area referred to in his representation. As the report remarks, "the replies to these inquiries will probably convey valuable information as to the condition of the poorer districts of the metropolis, and will, to a great extent, guide the Board in the discharge of the novel and important duties confided to it under the Act." We shall await the publication of these replies with considerable interest, as they will, if we mistake not, show the valuable quality of knowledge ordinarily possessed by metropolitan health officers, and of a kind, too, that can hardly be acquired and collected by any other official.

THE STATE OF LUNACY IN IRELAND.

THE twenty-fifth report of the Inspectors on the District, Criminal, and Private Lunatic Asylums in Ireland, although exceedingly brief, contains a valuable summary of the state of lunacy in Ireland at the present time.

On the 31st of December, 1875, there were under the immediate supervision of the inspectors, 11,777 patients, the subjects of mental disease, distributed in the following manner:—In district asylums 7741; in Central Criminal Asylum, Dundrum, 172; in Lucan Government Asylum, 29; in private asylums, 653; in poorhouses, 3179; in gaols, 3. In addition, however, to those under immediate supervision, the police returns of idiots, imbeciles, and epileptics living with their friends, or not having any fixed habitation, show the existence of 6848 such persons; making a general aggre-

gate of 18,625 persons labouring under some form of mental disease; this giving a proportion of 3·20 per 1000 to the whole population.

During the present year, as compared with 1874, there has been an increase of forty-four in the insane at large; but in the class of lunatics properly so called there has been a decrease of 280. This result is attributed to the fact that there is a growing disposition to send acute cases to institutions specially constructed for their scientific treatment. The mortality has been greater amongst the male patients in district asylums than amongst the female. The recoveries have been absolutely equal in the two sexes, although the number of female patients under treatment was smaller than that of the male patients.

The inspectors consider that Irish asylums are particularly fortunate in having a lower death-rate than the general average. This year it is 7·60 per cent. upon the total number under treatment, as against 9 per cent. in English asylums. Irish asylums are, we think, fortunate in not having any cases of general paralysis of the insane to deal with, and this circumstance may, perhaps, account for their exceptionally low mortality. As the mortality in Irish asylums is so much below the average we should expect to find that their recovery-rate would be proportionately increased. And that we find to be the case, the recovery rate being 43·70 calculated upon the admissions, or 11·70 upon the average number resident.

The cost of maintenance this year is lower by one pound and tenpence per head per annum, mainly due, the inspectors think, to the reduced price of coal and articles of clothing, and to the greater return from the land under cultivation.

The inspectors next proceed to notice the private asylums. The number of patients under treatment in these institutions during the year 1875 was 858. The admissions were 186, the discharges 165. The recoveries exceed by five those of the previous year, and the deaths were less by three. On the management of these institutions generally the inspectors are enabled to report in satisfactory terms, the majority being conducted with carefulness and a becoming attention to the well-being of the inmates. The inspectors conclude their report with a notice of the Criminal Asylum at Dundrum. The institution is fully occupied on the male side, and would ere this have been inadequate to meet the calls made upon it had not the admission of patients been sedulously restricted to those whose offences were of an aggravated nature, or who had exhibited homicidal or other very dangerous tendencies. Hence the inspectors believe that the question of enlarging this asylum may before long be forced upon the Government. Appended to the report are nearly one hundred tables of statistics relative to the management of the various asylums in detail.

THE HEALTH OF THE METROPOLITAN POLICE.

THE health of the police is a matter of interest to the ratepayers of the metropolis, who contribute to their maintenance. It is, therefore, satisfactory to learn from the report of the chief surgeon of the metropolitan police that the health of the force during the year 1875, notwithstanding the unusual inclemency of the weather, was not below the average. The daily rate of sickness, which from the experience of former years is reckoned at 3 per cent., is slightly higher than the rate of 1874, being 3·2 per cent. On the other hand, the total number of fresh cases is slightly less. The increase in the daily rate of sickness is accounted for by the cases having been more severe and protracted, and not from there having been more cases of sickness, or more individuals sick. The number of men placed on the sick list owing to injuries received amounted to 565, of which 359 were received whilst on duty; no death, however, is recorded from violence. The number of men incapacitated from duty from sore feet amounted to 172; this number is small when the nature of the work is taken into consideration. We should naturally have expected to find the majority of these cases occurring during the summer months, when the roads are hard and the pavement hot, but such is not the case. For only 64 cases are reported during the six summer months, against 108 for the six winter months. We think the explanation of this increase during the cold and wet season of the year will be found to lie in the defective booting of the force, not affording sufficient protection against wet and damp. It would be interesting to ascertain whether a similar increase of cases of sore feet is noticed in the army during the winter months or wet weather. The number of diseases resulting from exposure is slightly less than for 1874; they are, however, still high, and might, especially in the case of rheumatism, we think, be materially reduced. We notice in the report of the superintendent of the Paddington division that the men complain, with the present arrangement of legging, "that their knees and feet get wetter with the legging than without, as the rain runs off their capes and great-coats on to the knees of their trousers, and down their leggings into the lace-holes of their boots." Such an arrangement is an obvious source of rheumatism, and we quite endorse the superintendent's recommendation that the leggings should have a flap to cover the lace-holes, and be made sufficiently high to protect the knees. The diseases of the zymotic class form only a small percentage in the sick return. There were 24 cases of scarlet fever, not a large number certainly, when we consider the close contact the policeman is brought into with infected persons and localities. Ten cases of enteric fever are recorded, resulting in three deaths. There is one return we do not think satisfactory—that is for "febricula". 98 cases. These cases of febricula, we suspect, are in reality mild and abortive cases of enteric fever; if so, it shows that the sanitary condition of the police-stations, with respect to the men's quarters, is not what it should be. More information is required on this point. Whilst speaking of the accommodation afforded for the police at the stations, we would ask, can nothing be done for the married men who lodge away from the station? According to the statement of the superintendent for the St. James division, "not half a dozen of the men of that division reside west of Regent-street, the majority living in Soho, and even there the rents are so high that the constables have to put up with the most scant and insufficient accommodation." Another superintendent states the high rent the married man has to pay keeps him always poor, and that, we think, is likely to render him less firm to resist temptation. Apart, however, from the question of health, decency, and humanity, we would ask, is it a safe policy to have such a large number of men scattered in different lodging-houses, and thus practically isolated if sudden emergencies arose? We cannot conclude without remarking on the great value of these annual returns of the chief surgeon, and pointing out the valuable fund of information to be gained as to statistics of sickness from the tables they contain. That information, however, would be more generally available if, in addition to the monthly returns of sickness, a yearly return was made out, and a little more information given on such points as the time lost per man in a year, the invaliding rate, and the mortality rate. Such returns, as we showed last week, in noticing Dr. Dickson's statistics as to the health of Her Majesty's Customs, are invaluable to benefit societies, as giving a clearer insight into the conditions of disease among large bodies of men of certain age and occupation, the average percentage of sickness and duration of disease.

THE "SEPARATE" SYSTEM OF DRAINAGE.

WE are reminded by a report recently received that this system has been now (in its entirety) in operation at Eton for about five years, and hence may be said to have had a fair trial. An account of the drainage-works of this town and college has been compiled by the Rev. C. Wolley-Dod, chairman of the Eton Urban Sanitary Authority, to which is appended the Report of THE LANCET Sanitary Commission, that appeared in October, 1874, the whole being published as a general sanitary report.

We may remind our readers that the essential principle of the separate sytem (as sketched out and elaborated by Mr. William Menzies, Deputy Ranger of Windsor Forest

and Parks), consists in keeping the sewage proper distinct from the surface and rain-water, the primary advantage being that the amount of sewage to be removed by pipes, pumps, and other engineering appliances, can be calculated exactly, according to the number of persons concerned, a stated allowance being of course made for increase of population.

When the Thames Navigation Act of 1866 made it incumbent on all the riparian towns to divert their sewage from the stream, the authorities at Eton set to work and applied to the Home Office for official assistance; and Colonel Ewart, R.E., having visited the place and obtained a large amount of evidence, reported "that the separate system would be the only means that could be adopted to meet the requirements of the Thames Conservancy Act." The soil in the locality of Eton consists of alluvial deposit resting upon drift gravel varying in depth, and this again overlying the chalk. The subsoil water has here always been a source of difficulty, and varies in its rise and fall from one to ten feet from the surface; so that, as is evident, no system of removal of sewage could succeed that did not provide a system of pipes impervious as regards subsoil water. We must refer our readers to THE LANCET of October 17th, 1874, for a detailed description of the Eton works. It is proper to remark that when our Commissioner visited Eton last year he found some of the sewers insufficiently ventilated, and some carelessness also as to the trapping of water-pipes. It may be assumed that these defects are now remedied, inasmuch as the school authorities at Eton have always been alive to the importance of securing sanitary excellence in household arrangements. The report before us shows that, both as to disposal and utilisation, as well as removal, of sewage, the separate system, as carried out at Eton, is a great success. The sewage, both fluid and solid, is sent upon the farm without any previous preparation, and does not remain in the tanks at the pumping station at any time more than five or six hours, as the flow through the sewer is continuous. The farm soil is a light loam, overlying Thames drift gravel, of a very porous character. Subsoil drains are unnecessary. The gravel acts as a perfect filter or drainage-bed, and the sewage as delivered freely passes away, and never remains stagnant upon the surface. The commercial aspects of the farm are sufficiently indicated when we record that the sewage of 4000 persons is dealt with on thirty acres (with thirteen acres as a reserve), and that the gross realised produce of the whole farm amounts to from £600 to £700 annually. (It would be well to deduct the produce of the thirteen acres that are farmed in the ordinary way, so as to arrive at an exact result as to the sewage farm proper.) In estimating the advantages of the system, as regards its general application, the population of the town to be dealt with, the situation of the farm, and the sort of soil upon it, are all matters for serious consideration. It is, as we take it, sufficiently shown in the case of Eton that the system is not only satisfactory as to removal, but as to disposal of sewage; but in this case, as also in the case of Windsor Castle (drained upon the same system), population and farm soil are favourable items. But Messrs. Ripley and Simmonds, the engineers, have surmounted some very awkward difficulties in connexion with the levels and the subsoil water, and have shown that the working of the system is not affected even by wintry floods, when the drain-pipes are sometimes surrounded with water.

We cannot but believe that, in these times of drainage difficulties, the separate system should receive more favourable attention from sanitary engineers, at all events with reference to towns having what may be called manageable populations.

FRENCH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

THIS Association met during last month at Clermont-Ferrand. Many interesting communications were read in the Medical section, which was under the presidency of M. Chauveau. We can only indicate a few of these. M. Leudet, of Rouen, read a paper "On the Occasional Supervention of Cerebral Anæmia upon Irritation of the Pleura during Thoracentesis and the Operation for Empyema," in which he explained the attacks (sometimes fatal) of convulsions, which at times accompany that operation, as due to the inflamed serous membrane becoming a kind of excitable centre, comparable to the "epileptogenous zone." Any cause—e.g., the process of washing out the pleural cavity by injections in cases of empyema—which acts on this part, may lead to the reflex production of cerebral anæmia and all its effects. Several cases of this nature are now on record, and M. Leudet related one, in which three injections, practised at different times, led to severe pain in the opposite side, and on the last occasion to a transitory attack of aphasia. The pleural cavity was eventually drained, and the attacks did not reappear.—M. Ollier, of Lyons, read a paper "On the different modes of treating Coxalgia."—M. Terrilon related a successful case of amputation of the arm in an albuminuric patient. The operation was had recourse to in consequence of diffuse cellulitis of the forearm following compound fracture; and it was interesting to note that the albuminuria, which was very considerable, and probably in large measure due to the local inflammation, disappeared almost entirely as the wound healed. Recovery was uninterrupted.—M. Tripier, of Lyons, drew attention to certain dangers attending the administration of Ether to children. In three patients, aged from five to eight years, this anæsthetic produced stoppage of respiration—but not, fortunately, of the heart. From experiments on animals, M. Tripier concluded that this result was due to the action of the ether upon the nervous centres, and not to the local irritant effect of the vapour upon the bronchial mucous membrane, as he at first believed. In such young subjects, then, he had discarded the use of ether, and had returned to chloroform.—M. Gallard read a paper "On some Changes in the Mucous Membrane of the Stomach," referring especially to the rupture of minute miliary aneurisms as an occasional cause of hæmatemesis.—M. Letievant, in a paper "On Resection of the Superior Maxilla," advocated the desirability of preserving the integrity of the infra-orbital nerve, in order to avoid the muscular atrophy that follows its division. He drew a striking parallel between two cases—one in which this nerve was, and the other in which it was not, divided.—M. Arles, of Montpellier, related a case of successful Removal of the Inverted Uterus by means of the Elastic Ligature.—M. Bourgade read a paper "On the Relations of Phimosis to Diabetes," with especial reference to the risk run in operating on the phimosis in that disease.—Dr. Dubouè, of Pau, advocated the employment of Ergot of Rye in Typhoid Fever, but his cases were too few to warrant a conclusion as to the efficacy of that line of treatment.—Among other papers was one by M. Wecker "On Drainage of the Eye," and one by M. Gayet "On the Anatomy and Physiology of the Sclerotic"; and a curious case of Double Consciousness was related by M. Aran of Bordeaux.

VACCINATION.

GRATIFYING evidence of the successful application of the vaccination laws is furnished by the recent report of the Medical Officer of the Privy Council. Mr. Simon says that the success of our modern laws in enforcing the general vaccination of infants is to be measured by the periodical returns which are made to the Local Government Board under the Act of 1871. Of such returns the first collection, which related to children born in the year 1872, was completed early in 1874, and a digest of it, prepared by Dr. Seaton, issued last year. A second such return, relating to children born in 1873, was completed in 1875, and a digest of it is given in this year's report. It will there be seen that of the 826,508 children registered as born in England and Wales in the year 1873, all up to a margin of less than five per cent. had been accounted for by the vaccination officers. Of 95¾ per cent. accounted for, 85½ were accounted for as vaccinated, and 9¼ as having died early and unvaccinated; while the small residue, not quite ¾ per cent. on the whole number of births, included infants who had contracted small-pox before they could be vaccinated, infants who had been certified as insusceptible of vaccination, and (the largest item) infants whose vaccination for the time had been postponed under medical certificate.

THE LANCET.

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FOLLY and feebleness are frequently associated, and it is one of the marvels of mental philosophy that the feebleness which begets folly may coexist in a mind with so much general strength and earnestness that the intellectual character is commonly and, on the whole, fairly, credited with power and sagacity. Side by side with acumen we find obtusity; a vigorous and exacting judgment compounded with impressibility amounting to a credulous abnegation of intelligence; a tame submission to any mystery claiming to be supernatural, which dethrones the faculty of reason, and in its place sets up that tyrant and traitor puppet-sense, susceptibility, by some men called "faith," by others "docility," by a third class "truth-seeking," but which is either pretentious ignorance aping the worship of the unknown, or an over-strained and dazed mind ready to take refuge from the harass of doubt in any delusion—offered from without. On this wise, and this alone, can we explain the unquestioned fact that many intelligent and strong intellects exhibit the extraordinary spectacle of a belief in "spiritualism." Whether this strange topic was unfairly, or by way of pleasantry, interpolated in the list of subjects to be discussed at the recent meeting of, what professes to be, an association of British *savants* for the promotion of science, as "certain phenomena connected with abnormal conditions of mind," it is under that aspect it may be most usefully considered. Ridicule is a powerful and often a useful weapon. It would seem to be the appropriate arm with which to fight windmills; but there are so many persons who, from different causes, in varying degrees and on diverse—almost contradictory—grounds declare themselves believers in spiritualism, that we think it expedient to treat the matter seriously, and, as far as may be possible, to give the subject that scientific consideration claimed for it.

One word at the outset as to what "a scientific inquiry" really is. It is not a visitation of *séances*. Facts, or what are stated to be "facts," may be collected by this *dilettante* process, but, the dictum of Mr. WALLACE notwithstanding, facts, real or alleged, will not satisfy the demand Science just now makes upon the propounders of spiritualism. Moreover, to speak plainly, we do not think persons accustomed to scientific observation, and practised in the art of analytical inquiry as applied to the province of nature, wherein much is inscrutable but nothing untrue, are likely to be good or trustworthy inquirers. THE LANCET was, years ago, the medium of a remarkably sagacious exposure of spiritualistic imposture in the case of the Sisters O'KEY, to which we recently alluded. Professor LANKESTER has just made a similar revelation in *The Times*. Such *exposés* are, however, happily rare, and the qualities required for their accomplishment are not commonly found among men devoted to science. Moreover little has been, or is likely to be, gained by direct observation. When a man not exceptionally well provided with common sense and acumen takes part in a *séance*, he incurs the risk of placing himself in a strait. He must either refuse credence without being able to assign a valid reason for his unbelief, or he will need to confess himself "shaken," when such an avowal involves a surrender of the only scientific position consistent with truth and progress—namely, that nothing can be accepted until it is proved, and nothing given up until it is shown to be false. Again, it is always open to the apostles of spiritualism to allege that a particular practitioner of the modern black art is an enemy in disguise, that he has betrayed the true faith, or that, outside, and unaffected by the malpractices of the charlatans exposed, there lies an element of truth to which science must finally do homage, and wise men will do well to take heed. The position we now take up is briefly as follows.

There are certain preliminary objections to the hypothesis that the phenomena attributed to super- or extra-natural causes are justly so ascribed, which appear to us all-conclusive. The whole analogy of Nature in its manifold energy goes to show that economy of force governs the conduct of every normal operation. There is no precedent of waste, or even an excessive use of power. Without raising the question of *miracle*, it is worthy of note, in passing, that even in the best formulæ of this class the method in which a result was brought about differs essentially from that which the spiritualists propound in support of their allegations. For example, the writing on the wall at BELSHAZZAR'S feast must be held to be the archtype of written messages said to come from spirit-land; but how essentially different is the idea of that miraculous writing by a hand tracing a solemn warning on the wall of a vast chamber, visible to all present, and the pretended penmanship of a spirit who either will, or can, do nothing until it is asked, who requires to be summoned by name, like a schoolboy, before attention can be procured, and who, while never once volunteering a communication, or, when interrogated, stating an interesting fact or making a useful suggestion to its bereaved friends on earth, invariably professes the deepest concern for their welfare, and not uncommonly proclaims itself an ever-present guardian or attendant angel. The curious commingling of waste of power, impotency, and lack of purpose attributed to the denizens of the spirit-world is in itself an obstacle to faith which might well stagger any serious inquirer. They seldom, or never, act until spoken to; and when they do move, men and women who were not wholly devoid of sense while on earth indulge in the most ridiculous extravagances, and expend their spiritual power in such grotesque absurdities as turning tables, rapping the legs of tables, chairs, and even three-legged stools on the floor, and, when asked to write, require to be provided with slate-and-pencil. It is strange these manifest incongruities, so disparaging to the spirits, do not open the eyes of "believers" to the real nature of these phenomena.

The "operation of mind upon matter," "the reaction of the psychological and the physical," are glib phrases on the lips of spiritualists; but what do they mean? Is it an ascertained fact that mind is something independent of matter? that the psyche is no essential part, but only tenant and master, of the body physical? Surely these are not scientific truths, and it is a

purely scientific inquiry we are asked to undertake. Before any reasonable man can be justified in employing the supposed action of mind upon matter—discarding the scientific probability that it is in fact a *reaction*,—as an hypothesis to explain the phenomena of spiritualism, he must show that mind *is* something outside the body, capable of existing in a separate state, and endowed with the wholly exceptional power of moving material objects without material forces. If this is a windmill we are fighting, it is one which we are asked to believe moves without the wind; or, to change the metaphor, a steam-engine alleged to be propelled by steam-power generated somewhere apart from the fire, the boiling water, and the palpable sources of energy with which the machinery is commonly set in motion. We see a man or woman—generally a woman—move and act; she is put to sleep or into a reverie or trance—call it what you please. The process by which this artificial somnolency is produced is perfectly intelligible. Presently she begins to move, to speak, to perform actions, as an ordinary sleep-walker. We are now requested, and, strangely enough, expected to believe, that it is not the person before us acting, but another spirit for the moment occupying and employing her body—with such of the faculties as happen to be sufficiently awake—as an agent. We will not say the assumption is preposterous, but is it not purely arbitrary and gratuitous? Does it not violate every canon of scientific reasoning by passing over the obvious sufficient cause and substituting one which is unnecessary, if not purely imaginary—a procedure opposed to the genius of all science, insulting to common sense, and tributary to no intelligible process of truth-seeking, but a fruitful source and factor of every kind, and the grossest forms, of superstition.

The infinite littleness of the picture of spirit-land presented by this so-called "spiritualism" is associated with demands for blind credulity, and a reckless audacity in setting aside facts to make way for figments, almost unparalleled and wholly unexcused by any plea of expediency, preference, or need. The doctrine of spiritualistic influences on the material world would imply a reversal of the experience of students of nature from the earliest times. The tendency of all genuine discovery has hitherto been synthetical. Diverse and apparently antagonistic manifestations of force have been found to be uniformly due to material causes, sometimes springing from the same source. The lightning that rends the rock has been shown to be identical with the power that impels the needle to point steadily to the pole. The wildest commotions of this sphere have been traced to the operation, under different conditions, of the same force that keeps the planets in their orbits and makes the procession of day and night, with the recurrence of the seasons, orderly by a law immutable. There has been no discovery of new forces outside the world of matter, but a recognition of unsuspected relations between the lines of causation producing effects standing apparently apart. If spiritualism were true the process would be reversed; there must needs be an unknown and unsuspected force at work in the world, though not of it. Far more likely is it that unexplained phenomena can be explained in conformity with the laws at present promulgated than that a new power will be discovered antagonistic in its character, source, and modes of action to the principles elicited by the progressive study of nature through long cycles of time and each day exhibiting increased capacity to explain and harmonise the varied forms of matter and motion, however obscure and divergent.

What are these so-called spiritualistic phenomena? We do not now refer to their character, which is uniformly contemptible, or their purpose; that as a rule it is impossible to divine. A considerable proportion are probably good specimens of cunning imposture, in which the perpetrators intentionally deceive. Another class we are bound to believe delude the agents in their production, as well as some of those persons on whose notice they are obtruded. There is not the slightest difficulty in explaining this self-deceiving deception. A man may tell a story of his own invention until he believes it. Children and weak-minded enthusiasts daily perform this exploit, and a censorious world takes little heed of the achievement. How sensible and well-meaning men can bring themselves to impose on the credulous even in matters of gravest concern, and at the same time become the dupes of their own imposture, may be wonderful, but it is not the less on that account a fact that they do so, as the world will witness. The mind is so carried away by its enthusiasm that without formulating the dogma "it is right to do evil that good may come," the individual acts—more easily in companionship than alone—as though inspired by that precept. There is, however, a third phase of faith in spiritualism with which we are more immediately interested—the belief that consists in refusing to reject the system and theory as opposed to science because there are some phenomena in nature at present unexplained, and the supposed existence of a force outside the physical world promises a facile solution of what at present seems inexplicable.

The phenomena of spiritualism are the reflex productions of these several states of feeling, or perhaps we may be allowed to say "abnormal conditions of mind." It is unnecessary to pen a word on the subject of the large and growing class of direct impostures, beyond the assertion that, being exposed, these frauds ought to be visited with pains and penalties—wholly independent of any charge of extorting or obtaining money,—and fully as severe as those recently attached to the promulgation of false news. It is opposed to the interests of society that any portion of the community should be intentionally deceived. A belief in spirits, however brought about, would work dire mischief in the minds of the majority of the population, and if only as a probable factor in the total of insanity, the propagation of such a superstition by nefarious practices ought to be put down by the strong arm of the law. With the marvels conjured into existence by self-deceivers it may be necessary to deal in a different fashion, but the object in view is the same. There may be just ground for an appeal to the better judgment of the class of persons by whom *séances* of this class are supported, but the infatuation accompanying a delusion of the kind is generally so uncontrollable that the hope of exerting any considerable influence is not great. If such persons could be brought to regard the question from a common-sense standpoint they would see that the objections we have urged as preliminary are in fact conclusive. Until these are

answered it is impossible to proceed a step in this inquiry without a surrender of common sense. We are not concerned to stigmatise the delusion by violent epithets. Nothing would be gained by abuse. It should be sufficient to show that the whole conception is erroneous. If the victims of the craze are open to conviction, a calm review of the pretensions made, the powers supposed to be at work, and the results attained, must assuredly suffice to convince all except the veriest dupes that the image they worship is but the reflection of their own disordered brains.

Those who dally with "spiritualism," without either accepting or rejecting it, are the least respectable and the most mischievous of its supporters. They are always searching, but unable to find, the truth. The reason is obvious. Letting go the principles of natural science, they affect to think it possible there may be something outside and beyond nature which has the power of operating within the sphere of the physical world, but is not itself amenable to natural laws. So many paradoxes heaped together as go to make up the remarkable state of unbelieving credulity to which these minds are reduced, can scarcely be found in juxtaposition elsewhere in the domain of science, real or falsely so called. We hold that this play with a serious question is not only indefensible, but disastrous. It either argues ignorance or strange carelessness. Those who demand a "scientific inquiry" as to the truth of spiritualism might as well ask for a commission to examine and report upon the verity of any particular form of religious faith, with this difference, that in examining a creed avowedly supernatural, the inquirer is not required—on the contrary, he is forbidden—to carry his reason beyond the threshold of the inquiry, whereas in this case, while the phenomena to be investigated are alleged to be wrought by spiritual influences, the complaint is made that it has not been submitted to scientific tests. It is time the hangers-on of "spiritualism," the people who are not prepared to give in their adhesion to the theory, as to a system beyond the reach of sense and reason, were exhibited in their true light. The notion of a scientific association entertaining the proposal to discuss this subject is childish. There are no grounds of discussion. Science has no method or process by which it can deal with the question. At the outset we are brought face to face with facts which render the inquiry impossible. It is not that we discredit the stories told us, but, even if true, they would place the matter beyond scientific scrutiny and control. This is the conclusion to which we are driven at the beginning; and thus ends the attempt to satisfy a demand irrational in itself and impracticable in its requirements. Science can reason from the known to the unknown, but when at the threshold of the new province, it is necessary to abandon all the laws, principles, and traditions of the scientific method; it is not a question whether we are willing or indisposed to proceed—a step forward is impossible.

ALTHOUGH the Eastern contest has almost exclusively absorbed the attention of the public and the columns of our contemporaries for several weeks, we have hitherto refrained from entering into any sort of exposition or criticism as to the philanthropic work that is being done by members of our profession of various nations at the seat of war. Exposition is difficult, because we have, up to the present time, received very little information from our own correspondent; and criticism is still more difficult, because the accounts given in the chief journals as to the organisation of medical aid by the members of the Red Cross Society and others are so superlatively unsatisfactory. Sufficient information has, however, accumulated, through direct and indirect channels, to enable us to give some sort of synopsis of the work that is being done in this direction.

It appears that the first efforts made by our countrymen to furnish medical aid to the belligerents were conducted under the auspices of the Knights of St. John, by whose means Dr. A. O. M'KELLAR and five other junior surgeons were despatched to Belgrade, furnished with very slender financial resources. These gentlemen, on arrival, having, as we suppose, decided to give their aid to the Servians, adopted their uniform, went to the front, and have since been doing very good medical and surgical work, both in hospitals and in the field. A short time after, the National Aid Society commenced to move in the matter, speedily collected abundant funds, and sent out (or accepted the services of—which we know not) Mr. MAC CORMAC, of St. Thomas's Hospital, Dr. LASERON, and several other junior men, Colonel LOYD LINDSAY accompanying them in the capacity, we presume, of "administrator-in-chief." It is of course very invidious to criticise closely the doings of men, whether of our own or of any other profession, who come forward in time of war and pestilence for philanthropic purposes; but it is humiliating to be informed by the daily journals (and particularly in the columns of the *Daily News*) that these gentlemen, in effect, occupied a great deal of time immediately after their arrival in rushing about between Vienna, Belgrade, Semendria, and what was then "the front." We—as just now appear to be many other journals—are somewhat dependent upon the *Daily News* for recent information; but it is annoying to read—"The war was begun on July 1st; it is now the 17th of September, and the British National Aid Society have established their hospital in Belgrade, 100 miles from the front, for 150 beds, few of which are yet ready for occupation." Some facetious remarks follow, which, although "telegraphic," we do not care to reproduce. Mr. KENNETT, a most admirable organiser both in France and Spain, has been requested by the authorities of the Aid Society to get together an ambulance staff, but no money was provided for the purchase of horses, and so they have been, after many and very ill-advised efforts, "requisitioned" from the Servian peasantry. And it appears also that all the staff, stores, and other material of the Society have been sent direct into the Servian country, only some few instalments having up to the present time found their way into the Turkish lines. All these particulars, and others that we might easily epitomise, show, as it seems to us, a lamentable deficiency as to organisation in the National Aid Society. Its officers, as we are credibly informed, appear to be supplied with an almost unlimited amount of money, but allow small bodies, with far more slender means, but with good will and wisdom, to beat them utterly in practical usefulness. A letter published in the *Daily News* of Tuesday last, and signed by Miss EMMA PEARSON and Miss L. E.

MACLAUGHLIN, gives a most cheering account of good practical work accomplished, as far as we can ascertain, on an extremely moderate financial basis. These ladies, with Dr. WALTER LECKIE, a capital linguist, as their medical chief, are established at Domi Milanovitz, a village on the Danube; and have, under the auspices of the Servian Government, prepared a hospital for about 150 beds. Dr. LECKIE, who is accredited with the rank of major in the Servian army, is assisted by Mr. SUMNER and Mr. GREAM, students of St. Bartholomew's Hospital.

As matters now stand, it appears to us that the, so to speak, fragmentary aid supplied from England has exceeded in usefulness that afforded by the National Aid Society; and this is the more annoying (looking at the question even as one solely of prestige), because that Society can command an almost unlimited income, and still suffers itself to be beaten by small parties of philanthropists, Russian, German, and English, who succeed because they appreciate the difficulties of the situation, and face them accordingly. It has been our fortune to spend several months in Turkey during a time of peace, but when cholera was epidemic, both in Bulgaria and along the banks of the Danube. Although the circumstances occurred more than ten years ago, the intense difficulty and great cost of locomotion are vividly present to our minds. The condition of the country since 1865 has not materially, if at all, changed for the better, and these difficulties must always be intensified doubly and trebly in times of war. It is plain, therefore, that the National Aid or indeed any other society, to possess any elements of success, must commence by securing men of our own cloth, with some linguistic pretensions, and with plenty of practical energy; and by procuring also, *ab initio*, a man of the class of Mr. KENNETT, so that, before any medical officers or stores are sent out, ambulances and head-quarters of some kind may be ready to receive them. The cost of transport, now as always in Turkey, leads us to suggest that no stores of any kind (in the way of clothing, &c.) should be sent out. Messrs. BELL, of Oxford-street, have supplied a variety of valuable drugs for the Milanovitz Hospital, and the Australian Meat Company have sent a large quantity of their preparations, which have been most useful. But all bulky articles should not be sent, on account of the difficulty of carriage. Money, to be judiciously laid out on the spot, is the best form in which offerings can be made, when we have supplied a well-organised staff of surgeons and their impedimenta. But the National Aid Society, with its large command of money, has accomplished very little, and, as has been observed, appears to have given in effect, up to the present time, about 80 per cent. of aid to the Servian and 20 per cent. to the Turkish forces. No such proclivities can increase the usefulness or the prestige of the Red Cross.

FEW reports, relating to sanitary matters, have of late years reached us from India so noteworthy as the report for the second quarter of the present year of the Health Officer for Calcutta, Surgeon-Major Dr. ARTHUR J. PAYNE. It is a document remarkable, as sanitary things go at the two centres of Indian Government (Calcutta and Whitehall), for the masterly grasp of its subject, for its breadth of view, for its clear apprehension of the difficulties attaching to Indian sanitary work, for its cautious reasoning upon complex questions of etiology, and for its eminently practical conclusions. Notwithstanding recent glaring exhibitions of the astounding etiological fallacies which have of late too commonly influenced the sanitary advisers of the Central Indian Government, in consequence of the insufficiency of their information as to diseases among the native population, and their failure to recognise the true bearing of this insufficiency upon some of the important questions they have to deal with, especially with regard to cholera and "fevers," Dr. PAYNE'S exposition of the actual state of knowledge as to diseases existing among the native population of Calcutta will strike, we apprehend, persons interested in the matter, both in India and at home, with surprise. He describes a condition of the mortality returns for the city as only now admitting of a comparative examination of the causes of death in its several parts. "It is now," he says, "for the first time possible to trace the distribution of fatal disease in Calcutta, and to elucidate from statistics its local relations, whereas, before, its local incidence was known only on exceptional occasions, when an outbreak might occur of such virulence that the want of proportional figures was not felt." It is hardly possible to overrate the importance of this statement in respect to the study, as to the conditions of prevalence, of the three great classes of disease which affect the population of Calcutta—namely, "cholera," "fevers," and "dysentery and diarrhœa." And if this be true of Calcutta, how much the more is it true of other places throughout the country. Our knowledge of the diseases prevalent in Bengal has been mainly and of necessity derived from their occurrence in the army. But in those diseases which are common to the troops and to the native population, and of which the very commonness indicates probable common conditions of development, the necessity of a knowledge of the state of disease among the native population before the nature of the bond connecting the common prevalence can be determined has been very generally overlooked. It is in this particular respect that observations as to the etiology of cholera in Europe have been, and are, of immeasurably greater value than in India, because in Europe the conditions of the problem are capable of being more clearly defined and more exhaustively examined. To learn that in 1876 it has become possible in Calcutta for the first time to commence that kind of etiological research as to the commonly prevalent diseases which has proved so prolific of results here, is to learn that etiological research, such as it is understood in European schools, is only now becoming possible in that city of India where it has long been believed to have been most fully conducted. To have brought out this fact so clearly as Dr. PAYNE has done, is to have rendered an immeasurable service to the sanitary future of India.

Calcutta has lately been sewered and furnished with a pure water-supply, but the sewerage does not as yet affect the localities occupied by the native population, and so far as these are concerned it may be left out of account. Indeed, so far as the state of these localities is concerned, this is as

it has always been since the European occupation of the country, saving certain ineffectual operations of cleansing, except as to accumulations of filth. What that state is the European can hardly conceive, for to say that the native lives among, breathes, bathes in, and drinks excrement, conveys no very clear notion of the utter filth of the surroundings of a native domicile. In one respect only has there been a marked change in these conditions; a pure water-supply—pure as compared even with the purest supplies of European cities—has been brought within the reach of the native population, and they have availed themselves of it. This happened in 1870, and since that time the diminution of cholera and mortality from cholera in Calcutta has been remarkable. Dr. PAYNE examines elaborately the possible relation of this diminution with the introduction of the purer water-supply, and he concludes that "between 1870 and the present time the history of the drinking-water has been plainly written in terms of cholera mortality." He shows himself fully alive to the complexity of the question, and to the imperfections of delivery and insufficiency of quantity of the present water-supply as influencing the future prevalence of the disease. But he entertains no doubt, and the evidence seems to be conclusive on this point, that, other insanitary conditions remaining unaltered, the introduction of a pure water-supply in Calcutta has been followed as a consequence by a remarkable and continuous diminution in the prevalence of cholera in the city.

But to secure all the good to be obtained from this great change it is necessary that the numerous horrible water-tanks in all parts of the native city should be filled up, and this important self-evident measure is urged upon the municipality in language which can hardly be strengthened. It is urged as first in immediate importance, but as part only, of the measures required for the purification of, and for keeping cleanly, the native city. The question is not one of mere local interest. Dr. PAYNE justly says: "Every year the probability becomes greater of a widespread epidemic, which shall again draw the attention to India as its birthplace. . . Unless previously there shall be in Calcutta some effective exercise of power, local or higher, there can be no escape from the prospect that this city will be foremost among those held up to the condemnation of the world as a place where, with full knowledge of having dispensed calamities in the past, and foresight of further calamities which, as like results of like causes unremoved, must surely find here a starting-point, the people and the authorities have been content to maintain a breeding-place for mortal disease, and have complacently sanctioned its dissemination through Europe."

We commend this statement to the Indian Government and its optimist sanitary advisers.

A FEW of the chief continental cities present increasing death-rates. Berlin, by the latest weekly return, had a mortality of 41 per 1000 annually. Twenty-two deaths from enteric fever were recorded, and the same number from diphtheria. In Paris, with a death-rate of 26 per 1000, there were 72 deaths from enteric fever. The death-rate of Vienna is comparatively low—21 per 1000,—although small-pox is prevalent.

Annotations.

"Ne quid nimis."

THE "DOCTOR'S" HOLIDAY.

AN interesting, though somewhat one-sided, article in a recent number of the *World* is entitled "Æsculapius on Leave." It is complained that all the consultant physicians and surgeons take their annual holiday at the same time, and London is "literally doctorless." The profession is urged to organise and combine, with the view to institute a system of "vacation physicians and vacation surgeons." "Let the doctors follow the example of the Law Courts." The recommendation has not, we fear, the merit of novelty, and it is forgotten that medical men are in the position of barristers rather than Courts of Law, and gentlemen of the long robe exhibit considerable alacrity in getting away as early and often as possible, wholly irrespective of the claims and wishes of their clients, who, be it confessed, fare on the whole very tolerably in the hands of their solicitors. The *World* is, it may be suggested, not sufficiently appreciative of the worth and work of the "general practitioner," and although it recognises the fact that most absentee physicians and surgeons have appointed a "substitute," evidently regards that functionary as a theoretical person rather than a matter of fact aspirant to fame and fortune, who is not in the least likely to neglect the opportunity. Our contemporary is kind to confess "it would be cruel to deny the doctor his holiday," although the concession is made with a spice of sarcasm, and this rider, "at the same time, if doctors work as hard as many other classes of professional men, they are remunerated at a splendid rate." There is much vice in that "if." The *World* has apparently its secret misgivings whether medical men do work hard! Everything, of course, depends on what is considered hard work. If a monotonous round of doleful sights and sounds, in which the eye is wearied by the spectacle of humanity suffering its worst pains in life, and passing through its final agony; if appeals for aid, which the physician is too often powerless to render, complainings which he cannot allay, sorrows his art is unable to relieve; and to this added a continuous strain of anxieties, frequently intensified to a pitch of extreme solicitude, be not work, and hard work, too, the *World* is right in doubting whether the doctor earns his holiday. Otherwise there is scarcely room to question the claim for relief from such labour—as often, and for so long a period, as may be practicable. As a matter of fact, the career of an earnest and active practitioner, whatever his grade—and the higher the more exacting and irksome,—is by no means so "splendid" as the *World* imagines it. The rewards fall short of the ideal conception, and the struggle involves a far greater expenditure of time and strength to win them. For one who succeeds in medicine, as in every other vocation in life, a hundred fail. And what the doctor acquires he earns by an effort and industry as great and exhausting as the exertions of any other class of bread-winners. The bane of the medical life is the exacting character of the personal obligations it imposes upon the practitioner. He is, so to say, chained to his task, and no time, except that which he steals for the holiday once a year, can he call his own. Coupled with this there is a ruinous lack of healthy muscular exercise. Practically the busy physician or surgeon scarcely walks a mile from month to month. Fresh air is a luxury generally beyond his reach. A day in the open country is a priceless boon purchased at long intervals, riotously enjoyed, and almost deliriously appreciated. The *World* wonders how "doctors" contrive to divest themselves so completely, as it says they do, of their professional character when out on a holiday. It would cease to marvel if laymen

could comprehend the intensity of satisfaction with which physicians and surgeons find themselves emancipated, for a moment, from the perpetual expectancy of some hasty summons, the incubus of cares in practice, and the ever-present sense of working in a groove with a rhythmical series of concussions alike wearing and tearing to body and mind. The schoolboy's delight at escaping the stuffy schoolroom and his routine duties is an inadequate illustration of the enjoyment experienced by a medical practitioner let loose for a brief respite from his labours. There is a serious personal aspect to this question of the medical holiday. The pursuit of professional duties cannot be less engrossing, but is it not possible that it might be less exhausting? The *Graphic*, in a recent article on "Exercise," amongst other wonderful misstatements—incidental to the treatment of a subject with which the writer is apparently unacquainted, in a manner beyond his province—makes the following: "To build up brain and muscle side by side transcends, we may be sure, all earthly skill." So far from this being true, unless the two are built up together, neither can attain any marked degree of excellence. The highest intellectual development is consistent only with the maximum of normal muscular strength. Of course some one part of the organism may be, and in fact, generally is, cultivated at the expense of the rest, but the result is neither natural nor healthy. To produce the soundest and most powerful mind, capable of performing the greatest and longest task with strength and equanimity, the whole being, physical and mental, must be developed. The partial and excessive growth of particular portions of the organism issues in collapse and disappointment. The great mind wears out the body, and while the former is in its zenith the latter dies. We think medical men especially need to be reminded of this truth, and urged to apply it to their own lives. The profession is short-lived. Judging by the rules upon which insurance offices base their tables of expectancy, the prospect of life for a medical man is always considerably less than would be due to the computation of contingencies. This is in great part the result of the almost total neglect of the need for exercise, the strengthening influences of fresh and pure air, systematic muscular exercise such as a man gets by shooting, hunting, or *moderate* pedestrianism, a frequent holiday, if only long enough to break the rhythm of monotonous labour, and secure relief from thought and care. It is impossible to exaggerate the importance of these matters. They are of vital moment, and coming as they do straight home to the profession, it is strange they are systematically disregarded.

THE DEATH IN A LUNATIC ASYLUM.

THE case of the late Mr. Wymberley, upon which we commented a few weeks ago, has now been placed before our readers in all its details. We have carried out the principle of our motto, "Audi alteram partem," and have let every fact that is of moment have its fair expression. The result is simply a confirmation of the views and opinions we first submitted. It is clear enough that the immediate cause of the death of Mr. Wymberley was the perforation of an old-standing ulcer of the stomach and the subsequent peritonitis; that the death occurred from this natural cause, and would in all human probability have occurred in the same way if the patient had shown no evidence of mental aberration, had never been injured, and had never been under restraint. Such form of death is one with which most practitioners who have been long in practice have become familiar, and there is about it no shadow of obscurity or mystery. At the same time, by an unhappy coincidence, it was too true that the ribs of the deceased gentleman had been severely fractured,—fractured to an extent that is almost without parallel. This condition naturally demanded and commanded inquiry, and it was, as a matter of course, at first confounded with the true cause of death. The fractures resulted from injuries, and it was assumed that all the injuries were inflicted during the nine weeks of the residence of Mr. Wymberley in Camberwell House. The evidence is convincing, however, to all unbiased minds that the injuries causing the fractures extended over a much longer date; and although it is probable that some of them were included in the period of asylum residence, others were clearly antecedent, while all were produced by agencies which would not, in a healthy state of the bones, have had such effect. Here, again, we meet with nothing that is out of the range of medical experience. Presuming that some of the injuries were inflicted in the asylum—and Dr. Schofield's most candid letter, as well as the decision of the Lambeth magistrate on the conduct of one of the attendants on Mr. Wymberley support this hypothesis,—the regret that such an hypothesis is tenable is tempered by the knowledge of all the circumstances. It is certain that the deceased, if he were injured in the asylum, died from a cause and a disease apart altogether from the injury; it is equally certain that the course pursued by the proprietors of the asylum was singularly open and conscientious; that they were the first to prompt inquiry into the cause of death, and that they are not more responsible for acts of injury than any man may be for acts of disobedience or insubordination on the part of those whom he is obliged to employ in his service. With these observations all further correspondence and comment on what may be called the moral aspects of the Wymberley case must close. On the scientific side, on the important subject of injuries to bones of the insane, we may have occasion to treat on a future occasion. On the Continent, as well as in England, this subject presents itself as one requiring careful and immediate investigation.

THE SPIROPHORE.

M. WOILLEZ, whose invention of the cyrtometer was hardly equalled by his use of it, has lately introduced to the notice of the profession in France an apparatus called the spirophore, for the treatment of asphyxiated persons, whether drowned or newly-born. The apparatus consists of a metallic cylinder, closed at one end, open at the other, and large enough to receive the body of the asphyxiated individual, which is passed within it, the head remaining free. A diaphragm afterwards closes the opening around the neck. A bellows, capable of holding a litre, communicates by a long tube with the interior of the case; the depression of a lever causes aspiration of the air around the body, and its elevation returns an equal volume of air. A glass in the front of the tube permits inspection of the chest and abdomen of the patient, while a rod, moving through a closed tube, rests upon the sternum and shows its movement. When a body is placed in the cylinder, the opening closed, and the lever depressed, the walls of the chest are moved just as during ordinary inspiration, and air enters the chest; the ribs are separated, and the sternum is moved forwards. Even the abdominal walls show a slight movement, evidence of the descent of the diaphragm. On the body of a young woman twenty-three years of age it was found that the quantity of air entering and leaving the chest each time was $\frac{1}{2}\frac{1}{3}$ of a litre, nearly double the normal amount. M. Woillez advocates its use in all cases of asphyxia by insufficient or poisoned air, from paralysis or atrophy of the respiratory muscles, in dyspnœa and suffocative bronchitis, in the respiratory inertia of chloroform poisoning, and in some other cases of apparent death. Its use is without danger, and not the slightest tear of the lung is produced by the expansion, nor is there

any determination of blood to the surface. It appears to have been applied at present only to the dead. In the discussion which followed, the general opinion was that the apparatus would do effectually but awkwardly that which artificial respiration, as at present used, also accomplishes, and that the rarity with which the apparatus would be available when needed would be a practical bar to its employment. It is curious that although the idea of the instrument was given in a closed note to the Académie des Sciences by M. Woillez twenty years since, in priority of publication he has been anticipated by M. Ebersold, of Interlaken, who described such an apparatus three years ago.

DROPS OF DEATH.

THE fatalities which so often result from popular ignorance of the susceptibility of young children to narcotics, have many times furnished us with the subject for painful comment. An inquest lately held at Manchester affords a fresh illustration, with circumstances which deprive the occurrence of even the slight excuse sometimes existing. A fatal dose of laudanum was given to a child seven days old by a monthly nurse. The child had been suffering from pain in the bowels, and in order to alleviate the pain, the nurse compounded a mixture consisting of three or four drops of brandy, one of laudanum, and something less than a dessert-spoonful of water; of this she gave the child a teaspoonful. On the following night the child was cross, and suffering from pain in the stomach, and the nurse prepared another dose of a similar mixture, and administered it in the same quantity as before. She admitted that, although she was sure there was only one drop in the first mixture, she might have put more than one drop in the second mixture, and might have administered more than one teaspoonful. The child was noticed next morning to present a strange appearance, but the nurse said nothing about the doses she had given! A doctor was sent for, who at once saw that the child was suffering from some narcotic poison. The nurse at first denied that she had given the child anything, but afterwards admitted that she had given it a drop of laudanum to quiet it. On being remonstrated with, she replied that she had been in the habit of administering the mixture, and that some medical man had recommended her to do so. The child died twenty-four hours after the administration of the second dose of laudanum.

The case affords only too characteristic an example of the habits of a large number of monthly nurses. Opinionated to the last degree, they consider their own knowledge of the ailments and appropriate treatment of children equal to any emergency and beyond all cavil. They act on their opinion without any wish for or attempt to obtain professional assistance. Are they not themselves professional, and better qualified in their special knowledge than any medical man can be? Accordingly, they "treat" the infants who are by the necessity of the case under their absolute control. They can give what they choose, and revel in the opportunity of stepping beyond the limits of their special province as nurses, and dosing the children with this or that pet mixture for this or that complaint, which they sometimes imagine, but more often create by their ignorance of the proper dietary of children, and by their needless aperients and carminatives, their brown sugar to relieve the natural hiccough, and their continuous doses of sweetened dill-water, about the most nauseating compound imaginable, to remove the flatus the sugar had produced. The bolder operators add sedatives to their list, and many a baby has passed silently to its grave, in consequence of the drops of laudanum which the nurse, unknown to others, had administered. In the case at Manchester such was the case. The poisonous dose was at first denied, and only on pressure, while the symptoms did not suggest a fatal issue, was it confessed. The coroner's jury returned a verdict of death by misadventure. It was, however, the misadventure of culpable ignorance, but of ignorance so common that its culpability is easily lost sight of, though scarcely diminished. We wish that we could hope that the censure which the coroner, at the request of the jury, gave to the nurse could be more widely known.

THE PHYSIOLOGICAL ACTIONS OF COLCHICIN.

THE most remarkable phenomenon that this agent produces is the complete loss of sensibility from paralysis of both the peripheric and centric nerve endings. The reflex excitability is consequently abolished. On the other hand, the motor nerves and the muscles retain their excitability till death takes place. In many animals the paralysis is preceded by a stage of excitation. That in frogs may rise in intensity till there is an outbreak of tetanic convulsions. The circulation of the blood is only slightly disturbed by the action of the poison. The heart continues to pulsate even after the paralysis of the central nervous system has commenced. The blood-pressure long remains unchanged, only sinking when the animal is moribund, and, in like manner, the paralysis of the inhibitory nerves of the heart occurs at a late period. The respiration becomes gradually less and less frequent, until it is entirely arrested, so that we must conclude that there is gradually increasing paralysis of the respiratory centre. In warm-blooded animals, and especially in cats, poisoned with colchicin, the mucous membrane of the whole gastric and intestinal tract is swollen and strongly injected, whilst the intestine contains bloody mucus. In consequence of this there are diarrhœa, vomiting, and colicky pains during life. The cause of the congestion has not as yet been ascertained. The fibres of the splanchnic and abdominal branches of the vagus are not paralysed. The kidneys are strongly hyperæmic, and their secretions diminished. The action of colchicin takes place very slowly, death only occurring after several hours; and it is remarkable that, as was observed some time ago by Schroff, the amount of the dose has scarcely any perceptible influence on the intensity or rapidity of the action of the poison. A few centigrammes, and in cats even a few milligrammes, are sufficient to cause death, which results from arrest of the respiration, whilst the heart continues to beat for some time. In this stage tonic or clonic convulsions occur both in cats and rabbits, which Rossbach attributes to asphyxia. Doses smaller than are sufficient to cause death have scarcely any action.

PLAYGROUNDS FOR CHILDREN.

IT ought to be generally known that the playgrounds of all Board schools are open to the children of the poor in the summer months after school-hours. It would also be well if the time were extended, and the police were instructed to make the parents of the little creatures who crowd the courts and alleys of great cities acquainted with the boon provided for them. Not only is life endangered, and too often sacrificed, by the habit of allowing children to play in the streets, but the risk induces many of the poor to keep their children in-doors, or turn them into dark and dismal backyards, where the healthful conditions essential to growth and development are impossible. Throughout society the playhours of children are too much neglected. Even the progeny of respectable parents are sent into dingy spaces in the rear of the school-house, shut in on all sides, cold, sunless, and depressing, during the daily recreation-hour. If more attention were paid to this matter the little ones would

have better bodies and more healthy brains. Education is a paramount necessity, but it does not consist in the learning of multiplication-tables, just as the religion of early life is something widely apart from the custom of attending church and Sunday-school in damp clothes, and struggling for an hour in the sultry or wet afternoon against an overpowering inclination to fall into a feverish sleep. Charity is too often a clumsy benefactor, and handles its *protegés* but roughly. Good and kind people, with the best intentions, inflict life-long injuries. The School Boards huddle children with all sorts of incipient disease into crowded school-rooms. Christian philanthropists drive troops of weakly half-fed boys and girls through all weathers to school and church for their souls' good, to the serious damage of their bodily health and happiness. The streets are cleared of children for the convenience of reckless drivers, and no thought is bestowed on the alternative that if they may not play in the gutters there is for most of these poor little mortals no accessible playground. One touch of human nature in our excellent legislation for the advancement of education, a thought that besides the mind there is body, besides the head, in common parlance, there is a heart, to be considered, would work a world of wonders in child-land, and the growing race of οἱ πολλοι would be sensibly humanised and improved.

DEATH FROM CHLOROFORM.

A DEATH has occurred at Leicester from chloroform in which the conditions of insecurity of the anæsthetic are well exemplified. The patient had been a hard drinker, but for some months had led a "temperate" life. A close examination revealed nothing which could render the administration of chloroform more than ordinarily dangerous. The anæsthetic was given by a skilled administrator, Mr. G. C. Franklin, who had given it largely when house-surgeon at St. Thomas's Hospital. Every precaution was taken to ensure a good dietetic preparation. After only half a drachm of chloroform had been given the pupils were observed to dilate and the heart's action to fail. Every effort to recover the patient was made without success, and he died in a few minutes. At the post-mortem examination, the heart was fatty and degenerated, and the kidneys were granular. The patient thus died from the administration of a dose of chloroform scarcely larger than that which is constantly given by unskilled administrators for the relief of cough or dyspnœa, and the conditions on which the death depended were undiscoverable by examination during life. It is rare that death occurs from the administration of so small a dose. No doubt the condition to which it is really to be ascribed is the degeneration, which was to be attributed largely to the man's intemperate habits. We believe that this is the third death from chloroform which has occurred at Leicester within six months, that in all the cases the patients were men, between fifty and sixty years of age, and that in each there was a history of hard drinking. These cases should press very strongly on the profession of Leicester the question of chloroform *v.* ether. We believe that some of the best London surgeons have long settled the question in favour of ether on account of its unquestionably greater safety, and that for years they have not performed an operation under the influence of chloroform.

The same lesson is taught very clearly by one of two deaths which occurred in London last week, while the patient was under the influence of chloroform. The history was that so common in such cases—violent struggling, stoppage of the pulse, death, and fatty degeneration of the heart discovered afterwards. The other case was the result of the administration of chloroform when the stomach was full of food, and illustrates too well the danger of such a practice, in this case unavoidable. A vomit was followed by a deep inspiration, and the trachea and larynx filled with half-digested food, so that even tracheotomy did not restore the power of breathing.

THE OLD CEMETERIES OF LONDON.

THE attention of the sanitary authorities of St. Pancras has recently been drawn to the disgraceful condition of the disused burial-ground of St. James's, Piccadilly, situate in the Hampstead-road, by the report of their deputy medical officer of health, Dr. Eastes. That gentleman found on visiting the burial-ground in question that it was in a very neglected condition, being overgrown with rank weeds, whilst the tombstones and monuments which are erected in different parts of the ground are passing rapidly into a state of decay, without any attempt to save them being made. Close to the edge of the ground, where it is bordered by houses, the inhabitants have evidently considered the "neglected spot" as a convenient dust-bin, and have consequently thrown refuse of all descriptions into it. At this part of the ground was found "a heterogeneous assemblage of articles, including old hats, boots, bottles, tins, oyster-shells, &c., and decomposing materials, such as bread, bones, skins, carcasses of cats—eight of which were counted,—two fowls, a rabbit, and some bedding materials, also rapidly decaying"; altogether a grewsome mass. We have no doubt the inhabitants of these houses, in hot weather especially, find this impromptu dust-bin rather overpowering, but are content to put up with such trifling inconvenience rather than be deprived of the privilege of shooting rubbish into this handy receptacle. If, however, they are careless of their own health and comfort, it is no reason why the neighbourhood should be annoyed by odours that are wafted some considerable distance from the immediate locality, or that passers-by should have their feelings wantonly outraged by this disregard of decency. We fear the state of the St. James's cemetery is common to all London cemeteries, and the indignation aroused by the exposure of the condition of this particular one will, we hope, lead to the general improvement of all. We understand an official is appointed by Government to see that these disused cemeteries are kept in proper repair. Either that gentleman regards his position as a sinecure, and is not "mindful of the unhonoured dead," or else the means at his disposal are inadequate for the purpose. A very little expense, however, would be required to convert these dismal wildernesses into flower-gardens, and to hide the progress of the inevitable monumental decay with clusters of evergreens.

THE SCARLET FEVER EPIDEMIC IN PORTSMOUTH.

PORTSMOUTH in 1874 and 1875 escaped the epidemic prevalence of scarlet fever which was then so severe in most of our large towns. The borough is, however, now suffering from this disease with almost unprecedented severity, at a time when the other nineteen of our twenty largest towns are unusually free from its prevalence. The present epidemic in Portsmouth may be said to have commenced during the last two months of 1875, but did not cause more than 55 deaths in the first quarter of this year. During the three months ending June last the fatal cases increased to 106, and during the eleven weeks ending the 16th inst. 143 more were registered. Thus since the beginning of the year this disease has caused 304 deaths within the borough, equal to an average annual death-rate of 3·4 per 1000 during the 37 weeks ending the 16th inst.; the death-rate during the last eleven of these weeks was as high as 5·4 per 1000, and in the week ending 16th, when 20 fatal cases were registered

the death-rate from scarlet fever was equal to 8·4. So fatal an epidemic of scarlet fever in a town like Portsmouth, with nearly 125,000 inhabitants, is of very rare occurrence in England, but the apparently uncontrollable ravages of this disease is one of the most discouraging features of the present condition of sanitation. The only known possible means of arresting the spread of the infection is isolation; and this means, for the larger portion of our urban populations, treatment in hospital. It is but natural, therefore, to ask, with reference to this present disastrous epidemic in Portsmouth, whether the Town Council, as the Urban Sanitary Authority, has taken any measures to check this epidemic by the only known remedial means—isolation. We are bound to admit that, so far as we are informed, the borough of Portsmouth is still without any hospital accommodation for the isolation and treatment of non-pauper cases of infectious diseases. This neglect of the sanitary interests of the town is the more remarkable, as the borough contains a favourite health and holiday resort, Southsea, the prosperity and sanitary reputation of which is inseparably bound up with that of Portsmouth, and must have seriously suffered by this increasingly fatal epidemic of scarlet fever.

"SICK NURSES."

THE current number of *Macmillan's Magazine* contains an interesting paper, signed "Maria Trench," on the subject of sick nurses. The several systems by which hospitals are now provided with efficient nurses are discussed, and contrasted with the old practice. The most important point brought out is that which experience has so abundantly illustrated—namely, it is vain to hope the employment of a few trained nurses will improve the nursing at a hospital where there is no organisation, no expert head, and, in short, no healthy stock upon which to graft the better system. Trained nurses require the superintendence of trained matrons. The moral would seem to be that the easiest, and perhaps the only way to reform an institution in which the state of matters has been felt to be unsatisfactory, is to appoint a lady superintendent who has herself been properly trained, set her free from all duties of housekeeping, let her concern herself with the nursing alone, and leave her to choose and train her own assistants. The great need of the profession for private nurses is not, unfortunately, likely to be met. The demand altogether outstrips the supply. If we might venture to suggest an important consideration to those who are devoting themselves with so much self-sacrifice and zeal to this work, it would be that the nurses we most earnestly long to secure are women who, with womanly devotion and skill, will simply and ably carry out the instructions of the medical authority, whether at a hospital or in a private family. Perhaps a less elaborate and costly system of training would suffice, and the difficulty of producing an adequate supply of sufficiently good nurses might be lessened if this were clearly understood. Only medical men know how indispensable it is to be served by docile and teachable agents, who are not too highly educated to be willing to obey explicit instructions.

THE POPE AND CARDINAL ANTONELLI.

PIO NONO's physicians are again alarmed as to the health of their august patient. In spite of the mental energy which carries him through fatiguing audiences, his feebleness of body increases, and the œdema of the left foot and ankle is such that he maintains the standing posture with extreme difficulty, and only for a short time. The symptoms of general senile dropsy are sufficiently threatening to cause much uneasiness to his medical advisers, foreseeing as they do the inefficacy of measures which rarely succeed in less tried constitutions. On Thursday, the 14th, in reply to the congratulatory address of an Irish deputation, he delivered a Latin discourse, in which his usual distinctness of utterance was so impaired that many of his words were inaudible. His *bonhomie*, however, continues, and while he amuses by his vivacity he gives evidence of an amount of vital resource peculiarly gratifying to his physicians. His Cardinal Secretary suffers severely from arthritic pains, but still more so from ischuria, and Professor Mazzoni, the distinguished lecturer on clinical surgery at the Sapienza, who saw him the other day, anticipates the gravest results from the approaching prevalence of the tramontana, and gives no hope of his being able to survive the winter.

ASPECTS OF THE THREATENED EPIDEMIC OF SMALL-POX IN LONDON.

THE epidemic prevalence of small-pox in Manchester and Salford, and, to a less extent, in Liverpool, has been chronicled from week to week in the Registrar-General's returns. Newspaper paragraphs have recently reported serious outbreaks of the disease in various parts of the country, more particularly at Blackburn and Derby, and it is to be regretted that neither the Registrar-General nor the local sanitary authorities have published any official statements respecting these outbreaks; the extent or fatality of the disease in these places can, therefore, only be the subject of the most random conjecture. The last weekly return of the Registrar-General calls attention to the fact that 16 deaths from small-pox were registered within the metropolis during the week ending on the 16th instant—a higher number than in any week since the epidemic of 1871-2. At the end of this week, the two Metropolitan Asylum District Small-pox Hospitals at Homerton and Stockwell contained 95 patients, showing a considerable increase upon the numbers in recent weeks; these hospitals contain accommodation for 204 in-patients. Since the beginning of this year, 378 small-pox patients have been received in these hospitals, of whom 67 have died, 216 have been discharged recovered, leaving 75 still under treatment. Eighty per cent. of the cases were vaccinated, and twenty per cent. unvaccinated. The mortality was 15·4 per cent. among the vaccinated, and 57·1 per cent. among the unvaccinated. In equal numbers of cases, deaths among the unvaccinated treated this year have been nearly as four to one among the vaccinated.

PROFESSOR REDWOOD ON COUNTER PRACTICE.

SOME remarks by Professor Redwood on the relations between medicine and pharmacy are worthy of the serious attention of all members of the Pharmaceutical Society, and especially of such members as seem to consider the two callings as identical in character. We almost entirely concur in Professor Redwood's views. He draws in clear language a broad distinction between a man informed as to the nature and treatment of disease, and another informed as to the collection and preparation for administration and supply to the public of various remedies prescribed by medical men. The distinction is too palpable to be unperceived by persons so well educated as pharmaceutical chemists are. But it is lamentable to think how much the distinction is disregarded, and how much some pharmacists assume the air and style of those acquainted by education with disease. They affect a knowledge of the most delicate functions, and of the most ticklish remedies. They prescribe for anything, from amenorrhœa to amaurosis. They will not even refuse to visit cases at home, or perform, after a fashion, minor operations. Professor Redwood well observes that a phar-

macist who prescribes for the sick acts with a "far greater responsibility" than that of an individual unconnected with any department of medicine. This sense of responsibility does not seem to impress the ordinary druggist. It may be, as Professor Redwood says, that a certain amount of counter practice is unavoidable, and that, as domestic medicine does so little harm, counter practice will do less. This, by the way, is rather doubtful reasoning. Be this as it may, we cannot but wish that the distinction so admirably stated by Professor Redwood were duly observed. The fact is that many pharmacists are so occupied in cultivating the prescribing business as to rely on it a great deal. The consequence is that far less attention is given to the art of providing and preparing for use good drugs than is consistent either with the public advantage or the convenience of the medical profession. It is one of our firm beliefs that many people suffer for want of good drugs, which is caused by a somewhat artificial system of charges. The same system compels medical men to dispense. There is far more work to be done by pharmacists, whenever they will give their undivided energy and attention to the duty of preparing remedies for public use on the prescription of medical men, in accordance with Professor Redwood's views.

THE UNIVERSITIES OF GLASGOW AND ABERDEEN.

THE combined Universities of Glasgow and Aberdeen have a very important duty to discharge in having to elect a successor to Mr. Gordon. Mr. Gordon, though not a member of the profession, has been very much alive to the importance of medical questions and medical interests, and undoubtedly his official position in the Government gave him great additional influence. It is probable that the new Lord-Advocate, Mr. Watson, will be the Conservative candidate on this occasion. We are given to understand that Dr. B. W. Richardson would be quite willing to come forward in the Liberal interest in the event of an invitation being tendered to him by the graduates; but, as he is not himself a graduate of either university, he naturally feels some delicacy in appearing in the field without some solicitation. The *rôle* of Medicine in the State is miserably misunderstood and unexpounded. It becomes such a constituency as that of the two Scotch universities to send something more than a lawyer to the House of Commons, even though he be a member of the Government. University constituencies were expected to add to the scientific knowledge of the House, and there is much in the present composition of the House of Commons to make conscientiousness in the discharge of their duties on the part of the universities more than ever necessary.

PIGEON-SHOOTING.

THE decision of one of the German provincial governments to prohibit pigeon-shooting matches, on the ground that they come under the definition of cruelty to animals, is one that every humane man will applaud. It is discreditable to us as a nation that the brutalising "sport" of slaughtering trapped birds should be permitted in this country. There is little doubt that, were it not for the sanction given to it by the aristocracy, and even Royalty, it would have been rendered illegal long before this. The high festival of the sport has just been held at Baden-Baden under distinguished international auspices, and it is painful to read the long list of English names among the competitors, some of whom, if we are not much mistaken, have held forth eloquently on the turpitude of vivisecting animals under chloroform—a work undertaken with the specific object in view of mitigating human suffering. English gentlemen should forsake the sorry pastime which is now becoming universally condemned, and which is so repugnant to the spirit of true sport. The example they set to unthinking men is most mischievous, as witness the crowds of sporting publicans and butchers who meet in our suburbs to shoot pigeons and smaller birds at a few paces' distance. We sincerely trust that the horrible practice we denounce will be effectually brought under the consideration of Parliament next session. Meanwhile the worthy folk who are so virtuously active in depicting the immorality of scientific vivisection may well bestow some of their perfervid eloquence in the direction of pigeon-shooting.

SLAUGHTER-HOUSES AND OFFENSIVE TRADES.

THE annual report of the Metropolitan Board of Works (to which we have specially referred in another column) shows that during the past year 284 slaughter-houses were abolished in the metropolis, under the provisions of the Slaughter-Houses Act, passed in the previous year. A large proportion of these were situated in the Tower, Newington, and Blackheath divisions. The average reduction for the whole of London (excepting the City, which is not within the Board's jurisdiction for the purposes of the Act) is twenty-one per cent. There is no doubt that this reduction of itself indicates a vast improvement in the sanitary condition of the metropolis. The Board has also, under the provisions of the above-mentioned Act, declared catgut-making to be "an offensive business," and so subject to the bye-laws framed under the Act. Blood and bone-boiling factories can now only be carried on in London at a distance of forty feet from public ways, and fifty feet from dwelling-houses, so that both are now practically abolished. No new establishments may be erected for soap-boiling, tallow-melting, and knackering, or for the manufacture of manure, but the business of a fellmonger and a tripe-boiler, as well as a slaughterer of cattle, may still be established anew and carried on under certain regulations. This Act, though passed in 1874, is only now beginning to show the benefits conferred, and a great many most useful practical hints with reference to its working have been given by the Society of Medical Officers of Health, whose metropolitan members are well acquainted with the nuisances that arise from offensive trades in densely-populated districts.

NEEDLESS NOISE.

THERE is more than enough of noise in every populous district, and particularly in crowded thoroughfares, without the intentional introduction, or, perhaps, we ought to say perpetuation, of a needless nuisance. Unfortunately some individuals, endowed with a special faculty of abstraction, or pleasantly deaf to external disturbances, do not feel the need of reform in this matter, and a few of the worst roadways in London seem doomed to be the ceaseless scene of turmoil, din, and confusion. The Strand, which, by the traffic it enjoys, would appear to lead to and from everywhere, has long been notorious as the most intolerably noisy thoroughfare in the metropolis. There is a possibility—a bare possibility—that it may at length be paved with wood. A meeting of the St. Martin's Vestry has been summoned for an early day to consider the proposal. Everybody interested in the matter should move, and at once. There is wood-paving, and wood-paving. No difficulty can be encountered in profiting by the experience of other localities, and adopting a description of wood, a mode of preparation, and a system of laying, which will secure the advantages without the drawbacks of wood. There is not the smallest reason why wood paving should be converted into a mere bed for slush by being covered with gravel and mortar. Nor is it necessary to leave the perish-

able material unprotected against wet and exposed to rot. The points to guard against are clearly made out, and if only moderate attention is bestowed on the matter, we may have a pavement which is safe and good for horses and vehicles, cleanly, and noiseless. If the opportunity is allowed to slip the Strand will be as intolerable as a place of residence or resort as it has been during the last ten years, and is now—even out of the season. We strongly urge the attention of all residents, and with the less hesitation because the reasons why action should be taken in this local concern hold good everywhere, and point to the repaving of busy thoroughfares not only in London, but all large cities, with wood, if only to mitigate the nuisance of noise.

THE PAUPER'S PHARMACOPŒIA.

LAST week we pointed out that a new workhouse pharmacopœia was likely to be wanted. This week we have evidence that outside paupers are likely to be treated in the same way, and have medicines prescribed for them, not according to their fitness, but according to their cheapness. A most daring and discreditable resolution has been passed by the guardians of Horsham. It is so contrary to the more enlightened treatment of sick pauperism which has obtained of late years, that we must give it in full.

"That notice be given to the medical officers that after the present quarter, no payment will be made by the guardians on account of expensive medicines."

Two or three guardians protested. Mr. Hunt said, if expensive medicines are wanted for the rich, they must also be wanted at times for the poor. Mr. Moses said, if these medicines are necessary—and the doctors are the best judges—we ought to give them. But protests were unavailing, and the motion was put and carried. We have heard of one law for the rich, and another for the poor; but it is strange at this time of day to have certain medicines for the rich and others for the poor. The spirit shown in this resolution is rapidly producing a distrust of the new doctrines of pauperism. Can anything be more revolting than to deny the poor remedies because they are expensive? It is to say that a pauper's pain shall not have the benefit of opium, that his ague shall not have the advantage of quinine, and that his consumption shall not be stayed by cod-liver oil. If this is political economy, the less we have of it the better. We cannot believe that the Horsham guardians, on reflection, will allow such a resolution to continue to disgrace their minute-book. Medicine is not an article to be haggled about. The most important medicines are dear. To withhold them is cruel. To expect the doctors to pay for them out of their scanty salaries is a meanness that is out of date.

PRIMARY CANCER OF THE SPLEEN.

PRIMARY cancer of the spleen is a pathological rarity. There are very few unequivocal cases on record; but among them may, perhaps, be classed one that was brought before the Société Anatomique in its April session, and recorded in *Le Progrès Médical* for the 2nd inst. The subject of the disease was a male, fifty-one years of age, admitted into La Charité, under the care of M. Woillez, with a history and some of the symptoms of cancer of the stomach. After death, however, the stomach and the whole intestinal tract were found to be healthy; but the spleen and lumbar glands were extensively diseased. The former organ measured eight inches in each direction, was of firm consistency, and smooth surface; but on section it was found to be pervaded with firm yellowish-white nodules of cancer, which together far exceeded the amount of parenchyma remaining. Some of the nodules were breaking down in the centre. The lumbar glands were also infiltrated, and formed a lobulated mass around the abdominal aorta. The liver contained a few miliary nodules, and was adherent to the diaphragm, whilst a solitary cancerous nodule was present on the corresponding pleural layer. Other secondary growths were found in the sternum, ribs, and vertebræ. The authors of the communication—MM. Affre and Moutard-Martin—while acknowledging the rarity of primary splenic cancer, point out that the disease was more advanced in the spleen than in the lumbar glands—the only other place in which it could be considered to have arisen; and they particularly insist upon the absolute freedom of the stomach and rectum from the disease. No mention is made, however, of the microscopical characters of the growth; an omission of considerable importance, since it is highly probable that it was of the nature of lymphadenoma, in which case the extensive implication of the spleen, as contrasted with the liver, and its association with the tumours, would not be so rare an event as the authors would have us believe.

CROUP AND DIPHTHERIA.

THE secretary to the sub-committee appointed by the Royal Medical and Chirurgical Society to inquire into the relations of membranous croup and diphtheria requests us to state that the committee are anxious to receive at as early a date as possible all replies to the circulars of queries which have been issued, as well as any other information on the subject. As it is very desirable that all attainable information on this important subject should be in the hands of the committee before they commence the task of drawing up their report, it is to be hoped that those who have not yet sent in their replies, or who have any facts of value in their possession bearing on the relation between these diseases, will furnish the committee with them, so that nothing may be wanting to ensure a thorough investigation of this difficult question. Replies should be addressed to the secretary of the committee, at the Society's rooms, 53, Berners-street, W.

TRAINING-SHIPS.

A PARLIAMENTARY paper has just been issued, giving certain returns as to the seventeen school-ships established for civil purposes in various parts of the kingdom. Six of these are moored in the Thames and four at Liverpool. The return is very incomplete, for, as regards the two training-ships for officers, no surgeon is included in the official staff, whereas there is, in point of fact, a medical officer attached to each vessel. Of the thirteen training-ships for seamen, it appears by the particulars before us that there is no medical officer attached to the *Akbar* or *Indefatigable*, at Liverpool; to the *Arethusa*, *Chichester*, or *Cornwall*, in London; to the *Wellesley*, at Shields; the *Southampton*, at Hull; the *Havannah*, at Cardiff; or the *Gibraltar*, at Belfast. In the case of the London, Liverpool, and Shields ships, we know that an omission has occurred, as each has a surgeon attached to it; and if the Hull, Cardiff, and Belfast vessels have no medical officer, the quicker the vacancy is filled the better. All particulars as to the sanitary condition of these ships are conspicuous by their absence. It is within our knowledge that during the last three years severe epidemics of scarlatina, ophthalmia, and enteric fever have occurred on board at least four of these floating establishments, and the last half-yearly report issued by the Port of London Sanitary Authority showed that the mode of fitting-up was most heterogeneous, and in some cases very defective. It is a matter of regret that no items of information were asked for by Captain Pim as to the mode of internal construction, the water-supply, the general health of the boys, and other minutiæ that, when

collected, would form a valuable basis for determining whether or not these schools afloat are healthy dwelling-places. They certainly are not economical, but there is an evident disposition to increase their number, and additional school-ships have already been procured or promised from the Admiralty for Plymouth, Bangor, and the Thames.

THE PUBLIC HEALTH ACT AT TUNBRIDGE WELLS.

THE Tunbridge Wells commissioners have adopted that portion of the report of the Police Committee in which they announce that they have instructed their solicitor to apply to the justices to state and sign a case for the opinion of one of the superior courts in the matter between them and Mr. Bisshopp. Our readers will remember that Mr. Bisshopp, a practitioner in Tunbridge Wells, was charged by the committee before the magistrates with being "in charge" of a man with scarlet fever, and exposing him in public places within the district. The magistrates dismissed the summons. We think the commissioners are not well advised in this reference. As some of their number said, it savours of vindictiveness. But we shall have the advantage of hearing whether, in the opinion of a superior court, a medical man taking much personal pains to see a man with scarlet fever placed in a suitable hospital is to be regarded as "in charge" of that person, and exposing him in the sense of the Act.

HISTOLOGY OF THE NERVES.

L. RANVIER, in a paper recently published in the *Comptes Rendus*, states that he has been engaged in examining the spinal and Gasserian ganglia of rabbits, by means of interstitial injections of osmic acid. He finds, in accordance with the observations of earlier investigators, that the ganglion-cells are unipolar. But whilst previous observers consider that all such nerve-fibres run either towards the centre or towards the periphery, he has satisfied himself that, after pursuing a longer or shorter tortuous course, each one joins in a T-form with one of the nerve-fibres of the posterior root with which it fuses. This insertion invariably takes place at the plane of one of Ranvier's nodes. Ranvier will not state positively that every single one of the unipolar nerve cell-fibres terminates in this manner, but points out that on breaking up a sensitive root at the level of the spinal ganglion, an extraordinarily large number of these T-formed communications exist. He also draws attention to the possibility that the processes of the unipolar cells may perhaps themselves fuse together to form a common trunk before joining a root-fibre.

APPOINTMENT OF NEW CORONER FOR LEEDS.

A SPECIAL meeting of the Leeds Town Council was recently held to elect a coroner to fill the vacancy created by the death of the late Mr. G. A. Emsley, solicitor. There were fourteen applicants for the appointment, five of the candidates being medical men, and nine legal. After a somewhat rambling discussion as to the relative claims of legal and medical candidates in general, the Town Council proceeded to elect Mr. Emsley's successor. At the first voting the five medical candidates received 29 votes, of which 14 were given to Mr. J. Seaton. The aggregate votes given to nine legal candidates were 116, of which 29 were given to Mr. Malcolm, and 20 to Mr. Brooks, both solicitors of the town. At the sixth voting these three named candidates alone remained in the list, and at the final vote 31 were recorded in favour of Mr. Malcolm, and 16 in favour of Mr. Brooks. Mr. Malcolm was then, on the resolution of the Mayor, appointed to the office of coroner by a large majority.

FEVER AT PADSTOW.

WE hear that there are about seventy cases of typhoid fever at Padstow, a shipbuilding and fishing town on the north coast of Cornwall. Although not of a very severe type, yet such a large number of cases in a population of less than 2500 renders imperative a thorough rectification of the water-supply and drainage, which are in a most primitive condition. Should the local sanitary authority experience any difficulty, or permit any delay, in putting these necessaries in a proper condition, we trust that an inquiry will speedily be held by one of the medical inspectors of the Local Government Board. The drainage and water-supply of nearly all the mining and fishing villages in Cornwall are so very defective, and typhoid fever is so frequently prevalent, that an official inspection of most of them would be of great value, and most beneficial to the general health of the inhabitants.

SANITARY PROSECUTIONS.

SOMEWHAT novel prosecutions under the Sanitary Act have resulted in decisions possessing very great interest to brokers and landladies. A few days ago a broker was summoned before Mr. Knox at Marlborough-street for exhibiting certain articles of bedding and other things which had been exposed to the contagion of scarlet fever without having had them previously disinfected. It transpired from the evidence given that the defendant was employed by a landlady to get rid of a tenant. Although informed that the tenant's child was suffering with scarlet fever and was at the time in bed, the man seized the bed, bedding, and other articles, and placed them in his van, but on being paid eight shillings he threw all the goods on the doorstep, and, after placing a padlock on the room door, went away. A medical man having proved that the child suffered from scarlet fever, the magistrate fined the defendant £4 10s. 6d., with the option of going to prison for a month, and expressed his opinion that the penalty fixed by the law was inadequate to the offence. The landlady was next summoned for allowing the room in question to be occupied without previous disinfection, and it was shown that she placed her own daughter in the infected room. She was fined five shillings and costs. It is to be hoped that the publication of these cases will deter others from infringing laws designed to preserve the public health.

DR. W. S. BOWEN, ophthalmic and aural surgeon to the Hartford Hospital (U.S.), records this month the occurrence in his practice of six cases of disease of the middle ear induced by the use of the nasal douche in treating naso-pharyngeal catarrh. Many will remember that Prof. Roosa published some time since in the *Archives of Ophthalmology and Otology* a report detailing sixteen cases of the sort. Dr. H. L. Shaw has also given his experience of eighteen cases, in three of which the mischief was caused, not by the ordinary douche, but by the posterior nares syringe, and in one by the practice of snuffling salt-and-water from the hand through the nostrils. Dr. Bowen says there can be no doubt that in his own cases the disease was entirely due to the forcible entrance of fluid thrown by the douche to cleanse the nasal passages and pharynx. In five of the cases the pain and disturbance about the ear were observed immediately after the fluid was passed into the nostril, and in the remaining case the connexion was so close as to justify a positive opinion as to the cause of the serious suppurative inflammation that followed. The writer observes that the nasal douche is really a dangerous instrument, the use of which should be discarded, save in exceptional circumstances.

A SINGULAR instance of the abuse of opium is detailed in a recent report of cases in the Bellevue Hospital, New York. The patient, a man formerly employed in the hospital, began the use of morphia subcutaneously, for the relief of pain, and continued it for two years. He employed Magendie's solution, and had increased the quantity until finally he was taking 300 minims every twenty-four hours, the largest number of injections in the time being twelve. The appearance of the man's body and thighs was striking, for they were studded with discoloured spots, cicatrices from old punctures and localised abscesses, some of which were surrounded with erysipelatous inflammation. The posterior aspect of the trunk was nearly as bad; for, failing to find sufficient uninvaded territory upon the anterior portion, he had learned to thrust the needle of the syringe into his back. At the latest date, the patient was suffering severely from the discontinuance of the opium, which the doctors had cut off entirely.

THERE is probably no anthelmintic so popular with general practitioners as santonin. It must, however, be within the cognisance of many that comparatively small doses have produced convulsions of a somewhat grave character. A German contemporary lately reported a case in which poisonous effects were produced in a child two years old by the ingestion of so small a dose as a grain and a half. Convulsions commenced in the face, and extended to the extremities, while the respiratory action was greatly impeded. Under warm baths, enemata, and artificial respiration, the patient recovered. The physician in charge of the case then instituted a series of experiments on the lower animals, and found that chloral and ether inhalations controlled the convulsions produced by santonin. He naturally argues that the same treatment should be pursued in the human subject when a poisonous dose is taken.

THE fifth annual report of the Local Government Board was issued on Thursday in the form of a volume of 461 pages. We can only briefly refer to it this week. The report contains interesting information, exhibiting the operation of the Public Health Act during the year. It appears that there are now 807 medical officers of health, and 808 inspectors of nuisances in the country, towards whose salaries the Government contributed, up to September last, the sum of £59,119. The amounts sanctioned during the last two years as loans to sanitary authorities in respect of urban districts were considerably in excess of the total amounts given in respect of the same districts during the ten years which followed the passing of the first Public Health Act. The continuous increase of expenditure on the part of the sanitary authorities is regarded as affording a most convincing proof of the amount of interest taken throughout the country in sanitary matters.

DR. FRANKLAND, reporting on the examination of the waters supplied to the metropolis during the month of August, states that the river-waters were all efficiently filtered, and they all contained a remarkably small proportion of organic matter. The water supplied by the New River Company was in this respect even slightly superior to the deep-well water of the Kent Company. By long storage the water delivered by the East London Company had entirely lost the evidence of previous sewage contamination which it possessed when taken from the river. The water supplied to Birmingham in the same period was clear, but contained a high proportion of organic nitrogen. The Glasgow supply, derived from Loch Katrine, was of a pale-brown colour, and contained a few suspended particles and a small quantity of vegetable matter in solution.

LAST week the Faculty of Physicians and Surgeons, Glasgow, entertained at dinner in their Hall a large number of the medical and other members of the British Association. Among the guests were—Professor Andrews, President of the Association, Sir William Thomson, Dr. W. Carpenter, Dr. Burdon-Sanderson, Dr. Cameron, Rev. Dr. Haughton, Mr. Turner, Dr. M'Kendrick, Dr. Redfern, Dr. Cleland, and a large number of members from various parts of the kingdom. The chair was occupied by Dr. Fergus, President of the Faculty; while Dr. Morton officiated as croupier. In reply to the toast of "Medical Literature," proposed by Dr. Charteris, Dr. Carpenter gave some interesting reminiscences of his editorial connexion with the *British and Foreign Medical Review*. The dinner was in every sense highly successful.

THE supporters of the Society for promoting Legislation for the Control and Cure of Habitual Drunkards will meet at the Charing-cross Hotel this day (Friday), at 4 o'clock, to appoint a president, vice-presidents, executive committee, and officers, and to agree upon a course of action. The promoters earnestly invite the co-operation of all interested in a subject which so deeply concerns not only the protection and treatment of the habitual drunkard himself, but the well-being and safety of the community at large. The hon. secretary of the Society is Mr. S. S. Alford, F.R.C.S., 61, Haverstock-hill, N.W., and the treasurer is Dr. Alfred Carpenter, Croydon.

THE report of the special committee appointed by the Croydon Local Board of Health to consider Dr. Buchanan's report on the late outbreak of typhoid fever in Croydon has been issued. The committee express their appreciation of the way in which the medical officer of health for the district has devoted a large portion of his time to the exigencies of the case during the prevalence of the epidemic, evidence of which is afforded by Dr. Buchanan's report as well as by the personal observation of all the members of the Board. Next week we shall probably discuss the committee's report.

WE have received a copy of an address delivered at the opening of the section of Public Medicine at the annual meeting of the British Medical Association in Sheffield last month, by Dr. J. B. Russell, medical officer of health for Glasgow. The address is able and interesting, and deals with the Glasgow Improvement Trust, provision of dwellings for the people displaced, flatted tenements in model lodging-houses, the doctrine of density in relation to health, and the effects of density on the composition of the air.

SMALL-POX has again broken out in Derby, imported thither, it is supposed, from Blackburn, where the disease, as is well known, is exceedingly rife. The small-pox hospital constructed two years ago at Derby for an epidemic, and which had since then remained untenanted, has been re-opened, and is now nearly full of small-pox patients. Several fatal cases have been reported in the town.

BOARDS OF GUARDIANS in various parts of the country continue to be exercised on the question of supplying pauper patients with stimulants. On Tuesday the Westbury-on-Severn Board resolved to continue the use of alcoholic fluids to their poor whenever recommended by the surgeons.

YELLOW FEVER is increasing in Savannah. Thirty-six deaths took place in the town on Wednesday last. It is calculated that the number of the sick amounts to 8000. Half of the population have left.

WE recently announced that cholera was prevalent in Murree. By the latest news from India we learn that the epidemic is abating in the station. There are a few cases still in the bazaar and the neighbouring villages, but no Europeans have been attacked for some weeks. At the convalescent camp, four miles from Murree, there have been a few fatal cases. At Rawul Pindee the disease is subsiding. So far no cases have been reported from the Peshawur valley.

A VESSEL has recently been dispatched from Rouen to La Plata, fitted with a system of refrigeration for the purpose of bringing home fresh meat. Cold is induced and kept up by the vaporisation and condensation of methylic ether, which refrigerates cylinders of water stowed in the hold, around which the meat is stored. *Land and Water*, in describing the scheme, says that, in the event of success, fresh meat from South America may be sold in Paris at a franc the kilogramme, or 9½*d.* per 2·105 lb.

THE rate of mortality in London last week was 17 per 1000 annually. The deaths, 1119 in number, included 16 from small-pox, 8 from measles, 50 from scarlet fever, 6 from diphtheria, 17 from whooping-cough, 21 from different forms of fever, and 53 from diarrhœa. So large a mortality from small-pox has not occurred in any one week since the epidemic of 1871–72.

MR. H. CROOKSHANK, M.R.C.S., L.K.Q.C.P., having been appointed surgeon-major to the Turkish Army during the present war, left for Constantinople on Saturday evening last.

A MEDICAL CONGRESS was opened at Turin on Monday last. The authorities of the city and many foreign physicians were present.

REPRESENTATION OF THE MEDICAL PROFESSION IN PARLIAMENT.

To the Editor of THE LANCET.

SIR,—Dr. Rogers, in his letter to THE LANCET of Saturday last, has sounded the *réveille* which I hope will have the effect of awakening sleepers to the important fact that a vacancy has occurred in the representation of the Universities of Aberdeen and Glasgow, and that a medical man should now represent them. He should be, if possible, a graduate of one of these universities; but if a graduate is not procurable, any medical gentleman of position with abilities and eloquence sufficient to represent a learned profession. I trust immediate action will be taken in this matter, for, if not, we shall have a speculative lawyer canvassing the constituency, who is sure to obtain a sufficient number of promises to mar the return of a medical candidate. Committees, therefore, should be formed in London, Glasgow, and Aberdeen, circulars should be sent out, and every possible means used to secure the constituency.

Let us remember that every profession and trade is well represented, and many of them more than represented, in Parliament, whilst unfortunately we are frequently misrepresented. An opportunity now offers of procuring a medical member, and it will be a great misfortune if the opportunity is allowed to slip through our hands. In this instance all political differences should be allowed to sink in the one common object—namely, the returning a medical man to represent us in the Commons House of Parliament. Some time ago Mr. Gladstone said that a great future was open to the medical profession. Let us now endeavour, by sending a proper representative to Parliament, to assist in making that future sure.

I remain, Sir, your obedient servant,

Lincoln, September 18th, 1876. WILLIAM O'NEILL, M.D.

TREATMENT OF SUNSTROKE.

To the Editor of THE LANCET.

SIR,—I have received a note from Dr. Wilmot Power with reference to the case of sunstroke treated with cold and the injection of quinine.

Dr. Power's experience in the terrible epidemic of fever in the Mauritius in 1866-67 led him to believe that quinine exercises a counteracting effect on stagnation of the blood. The drug was given by Dr. Power in very large doses during the coma of the fever, and the mortality in the regiment under this treatment was exceptionally low.

Whether in the stagnant condition of malarial fever and of sunstroke quinine acts directly on the blood or on the vaso-motor nerves is, of course, a moot question; but in any case the results of Dr. Power's treatment in the comatose stage are very suggestive.

Permit me to state that the whole merit of using quinine hypodermically in my case of sunstroke was due to the very efficient house-surgeon to the Bristol Royal Infirmary, Mr. H. M. Chute.

Believe me, Sir, yours faithfully,

Clifton, Sept. 13th, 1876. EDWARD LONG FOX.

THE KNIEBIS BATHS.

(*From a Correspondent.*)

KNOWN to few even of the members of the medical profession, but destined, if I mistake not, to fill a prominent position among fashionable health resorts ere the lapse of very many years, is this group of watering-places which is named from its situation in the Black Forest, close to the range of hills called the Kniebis, whose summit forms the boundary between Baden and Wurtemberg. The main reason for prophesying a speedy renown beyond their own district (by the dwellers in which, for a century or so, these health resorts have been greatly frequented) lies in the fact that increased railway accommodation has rendered the locality more accessible. From Appenweier and from Offenburg, on the Baden Railway, run two branch lines into the interior of the Black Forest, and either from Oppenau, which is the termination of the first branch, or from Hausach, a station on the second branch, can the Kniebis baths be reached. In the first instance we come to the most north-westerly point, and in the second to the most south-easterly. There can be few pleasanter excursions than from Oppenau to Hausach, taking the baths *en route*. The group consists of five baths—viz., Antogast, Freiersbach, Peterstbal, Griesbach, Rippoldsau, and I have enumerated them in what may be supposed to be the inverse order of their popularity. Of Antogast I know nothing, but propose to give a slight sketch of the other four.

At each of these baths there are, as is usual at such places, three or four different springs, and it is probable that in the Kniebis district there may be thirty or forty, or even more, healing fountains; for it may be said, with some truth, of mineral waters that "it never rains but it pours." The truth of this would certainly be admitted in the Nassau district, and as certainly in this district of the Black Forest. The wells here are all very similar in composition, the chief ingredients being bicarbonates of lime and magnesia (the former in considerable quantity), sulphates of soda, potash, and magnesia (in not very large quantity), carbonate of iron sufficient to give a very decided chalybeate taste, and large amount of free carbonic acid. They are indicated for all cases requiring iron, but especially for those cases of anæmia and chlorosis with a tendency to constipation, a tendency which the contained Glauber's salt is sufficient to counteract.

The elevation above the sea-level varies from 1000 to 2000 feet, Rippoldsau being the most elevated. The prevailing tree is the black pine, and, in fact, on the higher elevations there is nothing else, but in the lower valleys a great variety of trees is to be found,—oak, limes, plane-trees, mountain-ash, chesnuts, &c. For those who require a pure forest air, and wish to inhale the fresh mountain breezes, redolent

of the sweet odour of the pines, there can be no more desirable locality than these mountain baths. On the very summit of the Kniebis hill, more than 3000 feet above sea-level, at the very comfortable although homely "Gasthaus zum Lamm," I encountered a consumptive gentleman who had been sent here to breathe the mountain air according to the present "fashion" (and fashion one must call it until we have more definite knowledge on the point) of treating consumption. His life certainly was a happy and a comfortable one here, and, although seriously ill, he seemed able to enjoy it. The air was keen and exhilarating, and the depths of the forest afforded a protection against the terrible fierceness of the sun, as well as against the violence of the wind; and here, in a hammock slung from two pine trees, inhaling the pine-laden air, lazily dozing, reading, or writing, this patient spent his days most happily, and indeed I could hardly conceive anything more calculated to eke out advantageously the vitality which remained to him. I remained myself at this secluded spot for the best part of three days, and when the hour of departure came I left it with a most unusual regret, as one would leave a place which combined a beautiful and wholesome situation, tranquillity, simplicity of life, culture, good food, and a landlord at once obliging, talented, and amusing.

But of the baths themselves, and of the life at them, what shall I say? No greater change can be conceived than to come, as I did, from Homburg to the Kniebis. They form as it were the very poles of bath life, and to my mind the escape from the fashionable crush and cosmopolitan society of Homburg to the simple life in these almost purely German resorts was a great relief. The Germans make the most of their baths; their sea-resorts being entirely on the north coast, and hardly suitable for pleasant autumn residences, they are compelled to come *inland* for change of air, and in a large majority of cases I believe that the mineral water serves merely as the excuse for going somewhere. In England, when Paterfamilias wants a change from his city work, he discovers that "the children require sea-air," and so it is, I believe, in Germany; and the anæmia of one serves as an excuse for the whole family to go to the Kniebis, Schwalbach, or elsewhere for their regular summer holiday. The German baths, with their enormous bath-houses, and their array of paraphernalia necessary for hotels and hospitals, are apt to astonish the traveller, who regards them too rigidly from the point of view of actual sickness; but he who looks upon them as recreation-grounds, and resorts for prophylaxis as well as therapeutics, will soon cease wondering.

Rippoldsau, Freierabach, and Petersthal, all stand by the roadside. The high road runs through the very centre of all of them, and the traveller on the diligence who may stay for ten minutes is admitted for the time being into the very arcana of bath life. The bath establishments at each of these villages are in the hands of one proprietor, such proprietor being, in fact, an hotel-keeper in a very large way of business. An arch, forming a communication between two wings of the building, stretches probably across the road, and instead of the sign of the Red Lion or the Kaiser, the words "Bad Rippoldsau," announce to the traveller that here is to be found healing in addition to board and lodging. These bath establishments remind one of the great old-fashioned inns which are found flanking the post-roads in some parts of England, and, indeed, my first glimpse of the house at Rippoldsau recalled to me the famous Montem Hotel near Windsor. In place, however, of the mail coach with four bays, stopping all steaming at the door, with the guard in scarlet livery rousing the echoes with "three feet of tin," one must be content with a lumbering diligence crawling at snail's pace, with Hans the post-boy in shining hat and corded uniform discoursing discord on a penny trumpet, and the postmeister with spectacled and official countenance taking his survey from his seat in the coupé. The accommodation at Rippoldsau is good, and although there is room enough probably for 1000 guests or more, the demand this year has been in excess of the supply. This is due to increased facilities of access, and also, no doubt, to the fact that the Queen of Sweden has been making a lengthy sojourn here; for where Sovereigns go, there all other classes assuredly will follow. Mr. Cook, too, of tourist notoriety, has lately been paying his attentions to the Black Forest, so that for the future it will probably be as difficult here as it is elsewhere to get, for ever so short a space, "far from the madding crowd." The six or eight enormous hofs, or mansions, which constitute Bad Rippoldsau are situated in a valley, the natural beauties of which would strike the most *blasé* of travellers. Richly-wooded hills; meadows, even during the scorching weather of the past August, literally green as emeralds; a babbling water-course making sweet music as it tumbles Rhineward down the valley; a variety of foliage difficult to surpass; a profusion of the gayest flowers; peasants, both male and female, decked in the smartest of costumes; houses remarkable for their neatness and picturesque homeliness; these, together with the lights and sounds which are characteristic of rural existence, go to make up a picture which cannot but be pleasing to the lover of nature, and doubly so to one who has been working amidst the murkiness and the noise of some manufacturing or money-making Babel.

The daily routine is that common to baths. Up by times, and then to drink at the wells to the sound of music. And, as for the music, the least said the better. The bands at the Kniebis are literally "German bands," and nothing is to be done save to put one's fingers in the ears. Such tootling, such braying in cornets, such hectoring, booming bass—such variations, in fact, of that melody which killed the cow, it has seldom been my lot to hear. Then breakfast beneath the trees, followed by a bath, a novel, a leisurely walk or a drive, till dinner time. The baths are of all kinds, simple water or mineral water, and of any temperature; but the bath *par excellence* of the Black Forest is the bath to which extract of pine-tops is added, which is pleasant in the highest degree, and is certainly a sensuous luxury with or without therapeutic value—a question I feel unable to discuss, since I can find no data on which to ground a discussion. At 1 o'clock a bell summons the guests to dinner, which is served at an enormous *table d'hôte*, and after dinner comes the *dolce far niente*. Seated out of doors, with the sunlight flickering through the thick curtain of leaves, the men smoke, drink coffee, read newspapers, and discuss politics or Wagner (a great topic just now), or play with the children; while the ladies crochet, knit, prattle, read, and finally doze, as do also the men, until the heat has sufficiently abated to permit the evening constitutional, which is taken in the lovely and well-kept paths which are cut in all directions through the forest. No one who has not been through the Black Forest can form any idea of what high roads and public foot-paths can become if sufficient labour be spent upon them. I have seen nothing like them in England, except in the private parks of the very wealthy, and it is needless to say that these magnificent roads, well watered as they are, and almost without dust, are a great comfort, especially to invalids. At seven o'clock supper is taken, a great meal throughout Germany, and certainly very preferable to our eight o'clock dinners. At nine or ten all are in bed, and then at six in the morning *Da capo*.

Finally, we would say that in one respect these Kniebis baths are ahead of other similar establishments, and it is in this simple little matter, that they provide exercise for the upper limbs as well as the lower. In all baths there are to be found walks which encourage one to use the legs, but it is the especial glory of the Kniebis that it provides skittle- and bowling-alleys for its guests, and at Rippoldsau there is, in addition, an excellent swimming-bath. Croquet, too, is becoming fashionable. These are trivial details, but by no means unimportant ones. Life is made up of details, and a knowledge of these details is necessary for those one of whose duties it is to advise people "*Where to go.*"

Bad Rippoldsau, August 21st, 1876.

THE INTERNATIONAL MEDICAL CONGRESS, PHILADELPHIA.

(From our own Commissioner.)

THE International Medical Congress was opened on Sept. 4th, in the University of Pennsylvania. The Right Rev. Bishop of the State offered a short prayer appropriate to the occasion. Professor Samuel Gross, the surgeon of whom this city and country are so justly proud, addressed a most hearty welcome to the cosmopolitan gathering, and the business of the Congress commenced. Professor Gross was

elected President of the Congress, and Mr. William Adams, of London, is amongst the vice-presidents. Professor Lister, Mr. Brudenell Carter, and Dr. Barnes, have been appointed to preside over those sections in which they are respectively practising—viz., surgery, opthalmology, and obstetrics.

The system of business has been admirably arranged to ensure progress. Daily certain subjects, with questions appended, are alloted to each section for discussion, and upon these questions the sections report to the general meeting of the Congress on the following morning, the discussion in each section being opened by a reporter, who has been selected for his recognised ability to do justice to the subject.

As a type of the practical working of the above system I quote the following question and report from the section on Dermatology and Syphilology, and regret that time and space do not at present admit of the publication of the entire list of eminently practical questions which have been and are to be submitted to this Congress:—

"Section IV. DERMATOLOGY AND SYPHILOLOGY.—*First Question*: Variations in Type and in Prevalence of Diseases of the Skin in Different Countries of Equal Civilisation. Reporter, James C. White, M.D., Professor of Dermatology in Harvard University."

"*Report.*—The conclusions of the Section on Dermatology and Syphilology respecting the question of debate are as follows:—1. Certain obscure affections, the etiology of which is little if at all understood, even in those parts of Europe to which they are mostly confined, may be regarded as practically non-existent among us. Of such are *prurigo*, *pellagra*, and *lichen ruber*. 2. Certain diseases, directly connected with, and dependent upon, poverty and habits of personal uncleanliness, are less prevalent in the United States than in those parts of Europe of which we have sufficient statistical information for comparison. Examples of this class are the animal parasitic affections especially. 3. Some cutaneous affections of grave character, which are dependent upon, or a part of serious constitutional disorders, are of less frequent occurrence, and of milder type, amongst us than in Europe in general, or those parts of it where they are endemic. *Lepras*, the *syphilodermata*, and *leprosy*, are the most marked instances of this class. 4. Certain diseases of the skin, especially those of its glandular systems and those connected with its nervous system, are apparently more prevalent with us than in Europe. The most notable examples of the former are *seborrhœa*, *acne*, and possibly the heat-rashes of the latter, *herpes*, *urticaria*, and *pruritus*.—In addition to the above-mentioned conclusions, the following additional proposition was adopted: 5. The type of certain acute, congestive, and nervous diseases of the skin is more severe in this country than abroad."

Business in the section of Surgery commenced yesterday with a discussion upon antiseptic surgery. The reporter, Dr. Hogden, of St. Louis, opened the debate with an excellent address; and all wish that the example he set of confining his remarks to the subject of antiseptic surgery, as distinguished from the treatment of wounds generally, had been copied by his followers, for then the programme of this important section might have been maintained. As a matter of fact, however, this section occupied the whole of the sitting yesterday with the debate, and to-day for upwards of two and a half hours listened most patiently to Professor Lister's address upon antiseptic surgery. Professor Lister has announced that at last, immediately prior to his leaving Edinburgh, he has succeeded in preparing a catgut ligature which is satisfactory in every respect.

The greatest courtesy is shown to all foreigners, and it must be highly gratifying to the majority of the illustrious medical men who attend this Congress, to find how well their contributions to literature are known to and appreciated by their brethren in America. Last evening, the Congress were entertained in the Judges' Hall, on the Exhibition grounds, and though the weather was unfavourable, the company numbered upwards of five hundred.

Mr. Tufnell, of Dublin, and Dr. Simpson, of Edinburgh, are amongst the distinguished British delegates to the Congress. The general success of the meeting may be judged in a measure by the fact of 371 delegates having been already registered.

Philadelphia, Sept. 5th, 1876.

BIRMINGHAM.

(From our own Correspondent.)

THE musical festival recently held here has been a great success financially, and the General Hospital probably will reap as good a harvest as it did in 1873, when the net profits were £6577. Although the first festival, 108 years ago, only yielded £299, the funds of this, the oldest charity in Birmingham, are now triennially recruited to the extent of £5000 or £6000, and so it is enabled year by year to carry on in a more ample and complete manner its work of charity and beneficence.

The Annual Report of the Deaf and Dumb Institution is satisfactory. Sixty-four boys and forty-eight girls are already on the books, and the committee are enabled to admit the eighteen children who are candidates for admission without putting the friends to the expense of an election.

The introductory lecture at the Industrial Department of the Midland Institute was given by Dr. Wilson, medical officer of health for Mid-Warwickshire, on "Air in its Relation to Health."

At the last meeting of the Walsall Town Council an official representation was made by Dr. James Maclachlan to the effect that a certain area within the borough was unhealthy, and that the sanitary defects could not be effectually remedied otherwise than by an improvement scheme for the rearrangement and reconstruction of the houses in the said area. One hundred and nineteen houses, occupied by 506 persons, will be affected by the scheme, which was adopted, the carrying out of it being, however, deferred until an estimate of the cost of adopting it in its entirety could be obtained. I heartily agree with the recommendation of the mayor and of the medical officer of health that immediate action should be taken in this matter.

Lord Dudley has made an offer of a site for the disposal of the sewage of Dudley, and his offer was accepted at the last meeting of the Town Council of that borough. Deep sewers will now be made, and the town thereby rendered both cleaner and healthier.

Birmingham, Sept. 12th.

NEWCASTLE-ON-TYNE.

(From our own Correspondent.)

THE Coronership of North Northumberland is now vacant by the resignation of Mr. Smith. There are two legal candidates in the field, but I have not yet heard of a medical one coming to the front. For some reason or other the post has not been heretofore much coveted by our profession. It may be that here in the North the emoluments are not sufficient to induce men in good practice to relinquish their work and position: on the other hand, men with leisure for such appointments are rare; the fact is, we are mostly hard worked, and fully engaged in the North, although there is room for much improvement here in the way of remuneration for the amount of work done. Still, when all is said, and considered, we should be glad to hear of one of our brethren (for the sake of the principle involved) stepping into the lists and winning the post for our profession.

A case of Asiatic cholera was reported at North Shields on the 5th. The man had arrived by train from Hartlepool, and was seen by Dr. Stephens, who gave a certificate for his removal to the workhouse as a case of suspected cholera, where he died upon the following evening. At the meeting of the Tynemouth Board of Guardians on the 7th, Dr. Bramwell remarked upon the great danger of sending cholera cases to the workhouse. There is a floating cholera hospital there, and why the case was not sent there is not very evident. Considering how severely our Tyneside towns have suffered from this disease, it is not too much to expect that all due care should be taken when a case occurs, in the way of isolation and disinfection.

Some very effective work has been doing here, in a quiet way, too, by a Society having for its object the mitigation of dense smoke. When it is considered how much we suffer in

this district from the smoke nuisance, and which has been clearly shown to be quite remediable, it cannot be wondered at that public feeling should exist and be increasing upon the subject of its abatement. Much good has been done by this Society, but it has still much work before it in the way of removing a prejudice existing amongst manufacturers, which may be said to be often as dense as the smoke which they emit from their own factories. The Society has the aid, and deserves the hearty good will, of the profession here.

At the dispensary here two vacancies have been declared for the posts of honorary physicians, and our respected townsman, Dr. Wicks, is mentioned as likely to be one of the successful candidates.

Newcastle-on-Tyne, September 8th, 1876.

Obituary.

MAXIMILIAN JOSEPH CHELIUS.

AT Heidelberg, in his eighty-third year, has just died Maximilian Joseph Chelius, long a leader in surgical science throughout Germany, and familiar to the practitioners of other countries by his celebrated "Handbuch der Chirurgie," which has been widely popular in a French translation, and also in the English version by Mr. J. F. South. Chelius was born at Mannheim, in the Grand Duchy of Baden, and studied first in that city, and then at the University of Heidelberg, where he graduated in his nineteenth year as Doctor in Medicine. He plunged immediately into practice, while at the same time acting as physician to the Ingoldstadt Hospital; but soon afterwards he accompanied the Baden army to France, where he added to his rapidly maturing experience by observation of French practice. We next find him at Vienna, whose hospitals he attended, and thereafter those of Göttingen, Berlin, and Paris—a clinical tour which lasted up to 1817. In that year he was appointed at Heidelberg assistant Professor of Medicine, and in 1826 the Baden Government conferred on him the title of Privy Councillor at Court. By this time he had founded at Heidelberg a clinique in Ophthalmic Surgery.

Chelius is best known by his "Handbuch" already mentioned, which reached its seventh edition, in two bulky volumes, in 1851. He wrote a great deal, however, besides this treatise. We may specify his admirable essay "Ueber die Heilung der Blasen-Schneider Fisteln durch Cauterisation" (Cure of Vesical Fistula by Cauterisation), Heidelberg, 1845; the first volume of his "Handbuch der Ophthalmologie" (Manual of Ophthalmic Surgery), Stuttgart, 1844; and his share in the medical periodical ("Medizinische Annalen") which he founded in 1835 conjointly with Puchelt and Naegele.

For the last twelve years Chelius lived in retirement and in something like political disgrace, on account of the virulent and inveterate hatred which, in common with the great Hebrew scholar Ewald, he cherished for Prussia and her predominance in Germany. He has left a son, who has also distinguished himself in surgical practice and authorship—Franz Chelius, of Heidelberg.

PROFESSOR SIMON,
OF HEIDELBERG.

FOLLOWING close on the death of Chelius comes that of an equally distinguished ornament of the Heidelberg school—Dr. Simon, who held for fifty-three years the post of Professor of Systematic and Clinical Surgery in that seat of learning. It was but the other day that THE LANCET had to signalise Dr. Simon's masterly treatise on Dilatation of the Anus and Rectum, in which the author recommended for exploratory purposes the passing of the whole hand as far up the rectum as the aortic bifurcation—a contribution to practice of which, while recognising the great value, we pointed out the occasional risks. But that is only one out of many other services he has rendered to diagnosis. There is, besides, a whole series of deformities and lesions, previously regarded as incurable, for which he devised new and effective operations, or successfully improved those already in use. Seldom has a teacher been more beloved by his pupils, or a practitioner more esteemed by his patients, than Dr. Simon. When, in 1868, he took the place of Dr. Otto Weber, whose loss to science was all the sorer that it came so prematurely, his skill as a lecturer and operator was such as greatly to lighten the heaviness of the blow; and Heidelberg, thanks to him, maintained her old character as a centre of education unimpaired. A chronic illness, against which he struggled with a genial fortitude, at length forced him to resign his professorship; but if his voice was silent in the lecture-room, his pen was busy in the study; and the world may expect, ere long, a revised edition of his principal works, which have already marked an era in the progress of surgery.

Medical News.

THE will of Sir Edward Hilditch, M.D., has been proved under £4000.

THE foundation-stone of a new wing for women and children at the Coatham Convalescent Home, Yorkshire, was laid on Saturday last by Miss Margaret Rosalind Postlethwaite, daughter of the founder.

LAST week thirty-eight deaths were attributed to different forms of violence in London. Of these 33 were the result of negligence or accident, including 23 from fractures and contusions, 3 from drowning, and 3 of infants under one year of age from suffocation. Three deaths from suicide were registered.

IN the Bulletin to "Indian Public Opinion" it is stated that under instructions from Simla, Surgeon-Major C. Groves Irwin, in medical charge of station staff, Lock hospital, garrison class, district military prison, and senior medical officer, Sialkat, had arrived at Meen Meer to assume the duties of officiating Deputy Surgeon-General, British Forces, *vice* Surgeon-Major J. Gibbons, appointed administrative medical officer at Rangoon.

DR. BERNAYS, public analyst for Southwark, reporting on the operation of the Adulteration Act in this district last year, shows that the ales examined contained very little hops, although they were, alcoholically, rather strong. Porters were found to differ very much in quality; one sample contained no bitter principle soluble in alcohol. Of spirits he had examined two samples of gin and two of whisky. The former contained respectively 66 and 67 per cent. of proof spirit, and were free from any deleterious admixture. The whiskies contained 90 per cent. of proof spirit, and the only objection to them was that they were new.

THE LATE MR. FRANCIS C. FAIRBANK.—At a meeting of Governors of the Doncaster General Infirmary and Dispensary, to elect a surgeon in succession to this gentleman, the following resolution was passed:—"That the Governors desire to record their sense of the loss sustained by this institution by the death of Mr. Francis Carbutt Fairbank, whose services for many years as an officer of the dispensary, and, since the erection of the infirmary, as an officer of the joint institution, were zealous and valuable, and at all times much appreciated by the Governors; and that a copy of this resolution be sent to the friends of the late Mr. Fairbank, and that the same be entered upon the minutes of the infirmary."

BEQUESTS ETC. TO MEDICAL CHARITIES.—The Rev. Charles Boileau Elliott, rector of Lattingstone, bequeathed £1000 to the East Suffolk Hospital, Ipswich.—A Suffolk rector has given £500 each to the Seamen's Hospital, Greenwich; the Hospital for Sick Children, Great Ormond-street; and the Royal Sea-bathing Infirmary, Margate.—Mr. Adam S. Findlater has given £500 to the building-fund of the Stewart Institution for Imbecile Children, Dublin. — The Seaside Convalescent Hospital, Seaford, has received £500 from F. C. J.—Mr. F. T. Mappin, of Thornley, has given £500 to the Sheffield Public Hospital and Dispensary.—Mr. William Howell, of Lower Marsh, Lambeth, bequeathed £200 each to the London Hospital, the Surrey Ophthalmic Hospital, and the Earlswood Asylum for Idiots.

FOUL CISTERNS AND BUTTS.—In a recent report of the sanitary proceedings carried out in Bethnal-green during the year 1875, Dr. Bate, medical officer of health, says that in many of the houses inspected the arrangements of the water-supply were found to be defective, foul cisterns and water-butts being the rule. Very often the uncovered butt is placed alongside an overflowing dust-bin; in others the cisterns are placed over closets, and when this is the case the waste-pipes are usually found to communicate with the sewer. In one house, where there had been a number of cases of scarlet fever, the water was stored in a very dirty butt, which on the occasion of the officer's visit contained cabbage-stalks, tobacco-pipes, mussel-shells, and one live fish.

Medical Appointments.

ATKINSON, C. S. A., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for No. 5 District of the East Ashford Union, Kent, vice Bain, resigned.

BOLTON, W., M.D., has been appointed Assistant Medical Officer to the Ipswich Lunatic Asylum.

BOWER, W. Jun., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Blankney District of the Sleaford Union, vice W. Bower, M.R.C.S.E., L.S.A.L., resigned.

BRAMHALL, S., L.R.C.P.Ed., L.S.A.L., has been appointed Medical Officer for No. 3 District, and Public Vaccinator for Nos. 1 and 3 Districts, of the Ross Union.

BROWN, A. G., F.R.C.S.Ed., M.R.C.S.E., has been appointed Aural Surgeon to the London Hospital, vice Rivington, resigned.

BUSHARD, F., M.D., F.R.C.S.E., has been appointed a Surgeon to the General Infirmary, Northampton, vice Mash, resigned.

COOK, J. W., M.D., M.R.C.S.E., has been appointed Medical Officer of Health for the Tendring Rural Sanitary District, vice Gramshaw, resigned.

CORBETT, J. E., L.R.C.S.I., has been appointed Resident Surgeon to St. Michael's Hospital, Kingstown.

CRIGHTON, Dr., has been appointed Joint Lecturer on Practical Anatomy, Lecturer on Practical Histology, and Demonstrator of Anatomy, at the University of Cambridge, vice Wilson, appointed Demonstrator and Superintendent of Practical Anatomy at the London Hospital Medical College.

DALY, T., L.R.C.P.Ed. & L.M., has been appointed Medical Officer for No. 8 District of the Southmolton Union, vice Adey, resigned.

DAWSON, E., L.F.P.S.G., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the Finchingfield District of the Braintree Union, Essex, vice Rust, appointed to the Wethersfield District.

EGAR, E. T. S., M.D., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Oldswinford No. 1 District of the Stourbridge Union, vice Campbell, resigned.

EALES, H., M.R.C.S.E., has been appointed Medical Tutor and Demonstrator of Anatomy at Queen's College, Birmingham.

FOSTER, Dr., has been appointed Medical Officer of Health for the Horsforth Urban Sanitary District, vice Stonehouse, deceased.

GODFREY, T., F.R.C.S.E., has been appointed Medical Officer to the South Metropolitan District School at Herne Bay.

HOOD, G., M.D., F.F.P.S.G., has been appointed Medical Officer of Health for the Tow-Law Urban Sanitary District, vice Reid, resigned.

JONES, W. L., L.R.C.P.Ed., L.F.P.S.G., has been appointed Medical Officer and Public Vaccinator for the No. 3 or Western District of the Llandilofawr Union, Carmarthenshire, vice Lloyd, deceased.

JUMEAUX, B., L.R.C.P.Ed., M.R.C.S.E., has been appointed Resident Medical Officer and Secretary to the Newark Hospital and Dispensary, vice Quinton, resigned.

LAWRENCE, G. E., M.R.C.S.E., has been appointed Medical Officer to the Bath Police.

LEACOCK, C. G., L.R.C.P.I., M.R.C.S.E., has been appointed Medical Officer for the Wymondham District of the Melton Mowbray Union, vice Douglas, resigned.

OGSTON, F., Jun., M.D., has been appointed a Medical Officer to the Aberdeen Dispensary, vice Duncan, deceased.

POPHAM, S. L., M.B., C.M., has been appointed Medical Officer and Public Vaccinator for No. 2 District of the Daventry Union, vice Bennett, resigned.

PRATT, J. W., M.R.C.S.E., L.S.A.L., has been appointed Certifying Factory Surgeon for Wiveliscombe, and Medical Officer and Public Vaccinator for the Wiveliscombe District of the Wellington Union, Somerset.

RAWSON, W. F., L.R.C.P.Ed., L.R.C.S.Ed., has been reappointed Medical Officer of Health for the North Brierley Urban Sanitary District till Sept. 29th, 1877, and his duties to be extended to the Township of Wyke on and after the 29th inst.

RICHARDS, J. E., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Woodhouse District of the Huddersfield Union, vice Osborne, resigned.

RICHARDSON, T. W., M.R.C.S.E., L.S.A.L., has been appointed House Surgeon to the Dover Hospital and Dispensary, vice Turnell.

SIDDALL, J. B., M.D., M.R.C.S.E., L.S.A.L., has been appointed a Physician to the Bristol General Hospital, and Joint Lecturer on the Practice of Medicine and Pathological Anatomy at the School of Medicine, vice Martyn, deceased.

SMITH, H. N., L.R.C.P.I., M.R.C.S.E., has been appointed House Surgeon to the Sussex County Hospital, Brighton, vice Langdale, resigned.

THOMAS, D. W., L.K.Q.C.P.I. & L.M., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the Festiniog District of the Festiniog Union, vice Williams, deceased.

WOODS, D., M.D., L.R.C.P.I., L.R.C.S.I., has been appointed Medical Officer for the Lullington District of the Burton-on-Trent Union, vice Edmonds, resigned.

YEOMAN, J., M.D., has been appointed Physician to the Whitby Public Dispensary, vice Wilson, deceased.

Births, Marriages, and Deaths.

BIRTHS.

DALTON.—On the 10th ult., at Haslinton House, East Coast, Demerara, the wife of Henry Dalton, M.D., of a daughter.

DARWIN.—On the 7th inst., at Down, Kent, the wife of Dr. Francis Darwin, of a son.

DODGSON.—On the 5th inst., at Derwent House, Cockermouth, the wife of Henry Dodgson, M.D., of a son.

DUNLOP.—On the 15th inst., at David-place, St. Helier's, Jersey, the wife of Andrew Dunlop, M.D., of a son.

DYER.—On the 16th inst., at Ringwood, Hants, the wife of Henry Geary Dyer, M.R.C.S., L.R.C.P.E., of a son.

GAIRDNER.—On the 15th inst., at Ardrossan, Ayrshire, the wife of Prof. Gairdner, M.D., of a daughter.

RHODES.—On the 4th inst., at Royal-terrace, Weymouth, the wife of Charles Rhodes, M.D., of a daughter.

RIGBY.—On the 13th inst., at Winckley-square, Preston, the wife of James A. Rigby, M.B., of a daughter.

SMITH.—On the 14th inst., at Hounslow, the wife of Dr. Tyler Smith, of a daughter.

STEELE.—On the 13th inst., at the Superintendent's House, Guy's Hospital, the wife of Dr. Steele, of a son.

MARRIAGES.

HENDERSON—GORDON.—On the 12th inst., at St. Peter's, Dublin, William George Hume Henderson, L.K.Q.C.P.I., Surgeon Bombay Army, to Jane Sidney Louise, daughter of Samuel Gordon, M.B.

WOODLAND—LUND.—On the 15th inst., at St. George's, Hanover-square, by the Rev. T. H. Gill, Rector of St. Margaret's, Whalley Range, assisted by the Rev. J. W. Goscher, M.A., Clement C. Woodland, late Royal Navy, youngest son of the late R. R. Woodland, Esq., of Bridgwater, Somersetshire, to Frances, elder daughter of Edward Lund, F.R.C.S., Professor of Surgery in the Owens College, Manchester.

DEATHS.

ANDERSON.—On the 2nd inst., at Weston-super-Mare, Francis Anderson, M.R.C.S.E.

BLAIR.—On the 28th ult., at Kirkcudbright, David Blair, L.R.C.S.Ed., aged 85.

BOYD.—On the 31st July, at Georgetown, Demerara, John Stewart Boyd, L.R.C.P.Ed., aged 31.

ECCLES.—On the 11th inst., at Knackersknowle, Plymouth, Charles William Eccles, Surgeon, aged 31.

EWART.—On the 16th inst., at Annan, William Ewart, L.R.C.S.Ed., aged 65.

HANSON.—On the 1st inst., at Crescent Villa, Brentwood, Dr. Newton Hanson, aged 76.

HEMBROUGH.—On the 16th inst., at Louth, John Hembrough, M.D., aged 69.

MACAULAY.—On the 13th ult., at Gillespie-crescent, Edinburgh, Dr. William Macaulay, aged 61.

MACDONALD.—On the 9th inst., at Kippen, Stirlingshire, James MacDonald, L.F.P.S.G., aged 78.

MENNIE.—On the 30th July, John Mennie, M.R.C.S.E., Surgeon-Major, Staff Surgeon, Poona.

NORTON.—On the 20th inst., at Hereford-road, Westbourne-park, Robert Norton, M.D., late Chairman, and for many years one of the Court of Examiners, of the Society of Apothecaries, aged 74.

SIBTHORPE.—On the 6th inst., at Hume-street, Dublin, Henry James Sibthorpe, M.D., aged 71.

THOMPSON.—Drowned, on the 6th ult., on the Bar, at East London, Cape of Good Hope, William Thompson, M.B., aged 29.

VIVIAN.—On the 6th inst., at Townshend, Crowan, John Vivian, L.S.A.L., aged 79.

YOUNG.—On the 4th inst., at St. Leonard's, Adam Young, L.R.C.P.Ed., of Boston, aged 73.

[N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*]

Notes, Short Comments, and Answers to Correspondents.

MEDICAL OFFICERS AND REGIMENTAL BANDS.

A COMMUNICATION in our Indian contemporary, the *Pioneer*, points out in a clear and forcible way the injustice of making medical officers pay band subscriptions. We have already called attention to the same thing, and we quite concur with the writer of the communication in question that it is both illogical and unfair to levy a tax of this kind upon all medical officers serving with corps in India. A medical officer in charge of a detachment may never have seen or heard the band attached to the head-quarters of the regiment, for the maintenance of which he has to pay, and, as far as he is concerned, the existence even of such a band rests on hearsay. Formerly these subscriptions were paid by medical officers for solid advantages, they being at the time *bond-fide* members of corps, and taking their share in the social government thereof; but under the existing system they are nothing of the kind, and they cannot hope to derive any advantage, present or prospective, for the pecuniary outlay they are called upon to make, which, even supposing the charge to be an equitable one, is frequently out of proportion to that paid by the regimental officers. We cannot believe that so obvious a grievance will remain unredressed.

An Old Subscriber.—We are not aware that they have been published in the form of a volume. The author may be communicated with.

VARIATION IN STRENGTH OF THE OPIUM PREPARATIONS.

THE last number of the *Pharmaceutical Journal* contains a paper, with the above heading, by Mr. D. B. Dott, the subject of which was suggested by the Pharmaceutical Conference. It was not thought necessary to test samples of all the official preparations of opium, but only of the tincture, extract, and liquid extract. The samples examined were procured from druggists of good standing in London, Dublin, and Edinburgh. The results of the examinations cannot be said to be gratifying to medical practitioners or chemists. In 18 samples of crude opium, the amount of morphia ranged from 13·30 (is not this a very high percentage?) to 2·10 per cent. In the *extractum opii* the maximum amount of morphia found was 22·8 per cent., and the minimum 15·4. In 15 samples of the extractum opii liquidum, the grains of morphia in the fluid ounce varied from 0·6 to 4·5 per cent., the average being 3·12. 18 samples of the tinctura opii, the most important preparation to the practitioner, gave a variation in morphia strength from 4·37 to 0·55 grains in the fluid ounce, the average being 2·66. The method employed in these analyses was a modification of that recommended in the British Pharmacopœia. The obvious conclusions at which the reporter arrives at is that opium preparations are not remedies to be relied on. It has before this been proposed to prepare a strong tincture, assay it, and then dilute it to the proper strength. The present writer, however, believes that the solution of the difficulty will be the abolition of all the galenical preparations of opium from the Pharmacopœia, and it is pertinently urged that unless opium possesses therapeutical properties which are not possessed by its alkaloids, there is no reason for retaining it in the Pharmacopœia. Mr. Dott believes that the chief work of pharmaceutical chemistry for a long time to come will consist in the perfecting of processes for the isolation of the active principle of the vegetable remedies, so that in course of time all the mediæval tinctures and decoctions of the Pharmacopœia may be discarded, and be replaced by preparations of definite and unvarying strength.

W. J.—We cannot recommend anyone. Consult any good surgeon.

HEALTH AND SEWAGE OF TOWNS.

To the Editor of THE LANCET.

SIR,—In the general interests of public health, the Council of the Society of Arts appeal to the inhabitants of the metropolitan districts and to the public generally to send to the Society evidence of cases showing the various evils which have occurred from the present imperfect system of the drainage of houses. At the Conference on the Health and Sewage of Towns lately held at the Society, and attended by numerous representatives from various towns and localities in the kingdom, the importance of greater attention to the house-drainage, as distinct from the sewerage, was especially brought to the notice of the Society. It was pointed out that, however good the general sewerage might be, unless the drainage proper of the house and its connexions with the sewers were carefully planned, executed under due supervision, and maintained in proper order, there was imminent danger of typhoid and other diseases from the imperfect exclusion of sewer gases.

The Council are well aware of the extensive powers which are given by Act of Parliament to vestries in the metropolitan district to deal with this matter. As regards buildings erected and in course of erection since 1855, the date of the Metropolitan Local Management Acts, no doubt a large amount of supervision is exercised, and plans of the house-drainage are frequently deposited and are open for inspection of the ratepayers. But the powers of the local authorities are rather remedial than preventive of disease, and are more or less imperfectly exercised. The evidence already collected shows that in most of the metropolitan parishes a small proportion of the total number of the houses in them has been properly dealt with. Consequently the plans of house-drainage are, on the whole, comparatively few, even in parishes in the outskirts, where a considerable extension of building has taken place within the last few years. Neither owner, nor lessee, nor intending purchaser, as regards houses built since 1855, unless in some few exceptional and accidental cases, has any means of ascertaining whether the house is or is not well drained or properly connected with the sewers, and, if defective, how or in what direction amendment is to be sought. It is with a view to remedy this admitted evil, which reduces the usefulness of the main sewers on which millions have been spent, that the Council of the Society of Arts, in the interests of improved public health, have taken up this question, and have memorialised the Metropolitan Board of Works on the subject, and propose to address the President of the Local Government Board in reference both to the metropolis and to localities in other parts of the kingdom. The Council have sought for information and suggestions from the various metropolitan authorities having such matters in charge. They appreciate the valuable labours of these bodies; but they desire to draw public attention to what it appears to the Council needs further action on their parts, and they suggest that Parliament should be moved, if needs be, to confer additional powers and responsibility on local authorities.

Under these circumstances the Council invite communications both as to cases of evil arising under the present state of things in the metropolis and in the country generally, as well as any suggestions for remedy, and they will be glad to receive such communications before the 20th of October next.

I am &c.,

P. LE NEVE FOSTER, Secretary.

Society of Arts, Adelphi, London, Sept. 20th, 1876.

A very Old Reader.—An army surgeon is held pecuniarily responsible for certain stores placed in his charge; hence the object, we understand, of relieving the surgeon of a brigade depôt, going on leave, by another army surgeon, the place of the latter being supplied by a civilian.

Bodé, (Leeds.)—Anatomy: Ellis and Quain. Physiology: Carpenter. Materia Medica: Garrod. Organic Chemistry: Williamson and Roscoe.

THE letter of *Dr. Goolden* shall be inserted next week.

OVERCROWDING IN LIVERPOOL.

MR. W. R. PITCHER, in a paper read before the Economic Section of the British Association, gave a terrible picture of the condition of Liverpool. Some of the statements, indeed, seem hardly credible. The borough was said to have an average population of 99·1 to the statute acre; whilst some parts of the parish, which has about one-third the area of the borough, are credited with a pressure of population represented by 600 to the acre. Besides narrow lanes and alleys, there are 50,000 (?) little courts in Liverpool. The inhabitants had increased in number 126 per cent. in forty years, yet during that period the space occupied by labourers' dwellings in the parish had every year diminished. If there be no statistical fallacy lurking in these data, it cannot be doubted that a case has been made out calling for very energetic measures to remedy so deplorable and dangerous a state of things.

A NEW USE FOR COCA.

To the Editor of THE LANCET.

SIR,—I was recently induced to give coca another trial in a new direction. Now, I confess to belonging to that class of sportsmen, a class far more numerous than is commonly known, because the admission is not always made, whose nervous system is badly adapted for steady shooting. I have, in fact, often felt that if it were possible to exist without a heart I would be a better marksman. It is this organ which, when dogs point steadily, and the utmost composure is necessary for steady aim, by its unruly throbs, disturbs my whole frame, and secures immunity for the fleet and whirring covey.

Filling my flask with the coca tincture, instead of with brandy, I made the first experiment by swallowing, when commencing to walk, half an ounce of the tincture, with no apparent result. On the following day this quantity was doubled, taken in two doses at a short interval, with a certain amount of effect. It was not, however, until the third day, when the quantity of the previous day was doubled, making two ounces of the tincture, boldly taken at once, that the full influence of the coca was obtained.

I should premise that the distances daily travelled have hardly been sufficient to test the power of coca in preventing fatigue. I am bound to say, however, that I was not conscious of its having exercised any such power. The effect produced was, in fact, in a direction altogether new and unexpected.

As soon as the dogs pointed, I expected the usual inward commotion with its usual results; but, to my surprise, nothing of the kind happened, and down went the birds right and left. "Eureka," I said to myself; the coca has made me a steady shot. So, in fact, it subsequently proved, to the wonder and pleasure of my host, who is more gratified at seeing his friends enjoy good sport than in having the sport himself.

My stock of the tincture was insufficient for extensive trials; but I tried chewing the leaves, also with effect. From what I know of the strength of the tincture I am inclined to think that the drug is more active when simply chewed. Unfortunately, however, my power of chewing the leaves is limited by a nauseating effect of the process.

Judged by the effects described, coca would seem to be inhibitory as regards the action of the heart. Whether this result is produced by indirect action through the mental functions upon which the drug is said to act remains to be proved. The hints afforded in the meantime may prove of great value. Coca in sufficient doses would seem to be a powerful nervine tonic; and as its effects appear to be entirely harmless, if my observations are confirmed by others, its use will be hailed as a boon by many a brother sportsman.

I am, Sir, yours &c.,

Devon, Sept. 11th, 1876. A. L., M.D.

*** A lay correspondent, who was lately out in Bolivia for two years, also writes to us on the subject of coca. Whilst travelling at great altitudes, such as from 13,000 to 14,000 feet above the sea level, he experienced marked benefit from eating the leaves. Nearly all travellers on the Peruvian and Bolivian Andes use the drug as a remedy for that effect on the brain and lungs produced by rarefied air, which in South America is called "sorroche." One use to which it is put by the Indians is that of a "pick-me-up" after a debauch on alcoholic fluids. In Bolivia it is generally eaten with a paste made of wood-ashes and potato. Our correspondent propounds the belief that the leaf loses its virtue in transmission. This is quite possible. It is an undoubted fact that the cannabis indica, for instance, loses its potency in crossing the sea. It would seem desirable that a certain quantity of the coca-leaves should if possible be packed in an air-tight case. The price of coca at La Paz, where the best is procured, was last year 16 dollars per packet of 25 lb.—ED. L.

Scalpel, (Salford.)—The prostate is an obscure viscus, and good pathological treatises on it are scarce. Perhaps the best for all practical purposes is Professor Augustus Socin's monograph, "Die Krankheiten der Prostata." This, an enlarged edition of the professor's article on the Prostate in Billroth and Pitha's "Handbuch der Allgemeinen u. Speciellen Chirurgie," is a well-arranged and eminently practical little work of some 115 octavo pages, and will be found a cautious and intelligent guide to the practitioner, whether surgeon or physician.

Mr. Knott.—It shall be published in due time.

THE HARROGATE COMMISSIONERS AND THEIR MEDICAL OFFICER OF HEALTH.

To the Editor of THE LANCET.

SIR,—In your issue of to-day I see that you report Mr. Short as appointed medical officer of health for the urban district of Harrogate. I beg to inform you that I am still the medical officer, my dismissal not having received the assent of the Local Government Board. I have to thank the press generally for their powerful assistance, also the profession for their cordial sympathy, and the large number of ratepayers who have given me their active support.

Yours respectfully,

Harrogate, Sept. 16th, 1876. T. DEVILLE, M.D.

UNIVERSITY OF GENEVA.

FLORENCE has laid this seat of learning under considerable obligations. Its anti-vivisection party and the majority of its newspapers having driven Prof. Schiff from the laboratory where he was rapidly training a new generation of Morgagnis and Spallanzanis, that gentleman has taken refuge in the Swiss University, which has, accordingly, made a fresh start since its strength has been so effectively recruited by the distinguished physiologist and teacher. Every faculty has benefited by the attraction of Prof. Schiff's name. That of Medicine begins its winter course on the 25th of October under auspices even more promising than its founders Carl Vogt and Dr. Juillard, could have imagined. The magnificent lecture-rooms, museums, and amphitheatre, which the zeal of these gentlemen secured to the University, will now be resorted to by a larger number of students than their walls have yet contained—Russia and America, the extreme east and the extreme west, having already sent numerous *alumni* for enrolment. In Medicine and Surgery the chairs are filled by Swiss graduates who have supplemented their home studies by a sojourn at the Paris hospitals. In Anatomy and Physiology, however, Geneva has done well to invite lecturers of distinction from abroad. Prof. Schiff, as we have said, takes the latter subject; the former has been accepted by Dr. Laskowski, a Polish physician of European reputation for anatomical research and teaching aptitude. English students might do worse than spend a year of their quadriennial course at the University of Geneva. Thy will acquire through the medium of French and German accurate knowledge of Gallic and Teutonic medicine; while in the departments of Physics and Natural History they will find the traditions of De la Rive, de Candolle, Pictet, Saussure, and Claparède well sustained by Carl Vogt, Marignon, and Plantamour. The living is cheap, the climate healthy, the opportunities of physical recreation ample, and the intellectual society worthy of a city which has been the cradle and remains the capital of civil and religious Protestantism.

Anxious.—We never recommend a particular surgeon.

THE EAST LONDON MEDICAL DEFENCE ASSOCIATION AND THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

To the Editor of THE LANCET.

SIR,—The following correspondence will show to what extent the honour and dignity and interests of the medical profession are cared for by the Council of the Royal College of Surgeons.

I am, Sir, your obedient servant,

August 20th, 1876. R. H. S. CARPENTER.

East London Medical Defence Association,
533, Commercial-road, E., 22nd April, 1876.

GENTLEMEN,—I beg leave to apply to you for your permission to prosecute in your name several persons who are practising surgery in London without holding the licence of your College or of any other College, and who thereby render themselves liable to a penalty of £5 *for every time* they so practise.

For such practising in the country, a penalty of £5 per month can, I believe, be recovered by an informer without the sanction or aid of your College. I am, Gentlemen, faithfully yours,

R. H. S. CARPENTER, Hon. Sec.

The President and Council of the Royal College of Surgeons of England.

Royal College of Surgeons of England,
Lincoln's-inn-fields, W.C., 26th April, 1876.

SIR,—To your letter of the 22nd instant, addressed to the President and Council of the College, I have to reply as follows—viz.:

1st. That the Council do not possess any privilege enabling them to sanction the prosecution of the persons to whom you refer as practising surgery without any surgical qualifications.

2ndly. That so long as those persons do not assume the title of "surgeon," either by placing it after their names or on their door-plates or lamps, or in some similar form, as far as I am aware there *is not any law* under which they can be prosecuted for practising surgery.

3rdly. That if they do assume such title in either of the ways I have described, it is competent for any person, without the sanction of the Council of this College or any other body, to take proceedings against them under the 40th section of the Medical Act of 1858.

4thly. That the penalty under this section, on conviction, is a sum not exceeding £20.

5thly. That I do not know to what law you refer under which the penalty of £5 can be claimed, but that I am inclined to think that you must refer to some provisions under the Apothecaries Act, which are not applicable to the practice of surgery.

6thly. That the Council of the College does not undertake to take action in any case where a person calls himself a "surgeon" without any right to do so, but only in a case where the person places after his name the letters "M.R.C.S. Eng." or "F.R.C.S. Eng." when not possessed of these qualifications, as the College does not hold any exclusive right to grant surgical qualifications, and is not, therefore, called upon to take proceedings in the former of the two cases I have mentioned.

I am, Sir, your obedient servant,

R. H. S. Carpenter, Esq. EDWARD TRIMMER, Sec.

East London Medical Defence Association,
27th April, 1876.

SIR,—I am much obliged to you for your letter of yesterday's date.

In reply to your observations that "the Council of your College do not possess any privilege enabling them to sanction the prosecution of persons practising surgery without any surgical qualification, and that you do not know to what law I refer under which the penalty of £5 can be claimed," permit me to draw your attention to your Charter, 15th August, 5 Car. I., and to the Act 18 Geo. II., c. 15, by which you will see that your College can recover a penalty of £5 for "*every time*" a person practises surgery in London or Westminster, unless he holds a licence from your College, and that half the penalty goes to the Queen, the other half to the College.

As your College do not exercise their privilege by prosecuting offenders under the above-named provisions, I have to ask their permission to allow us to institute proceedings in their name, and to retain for our own use, in any case in which we may recover it, that portion of the penalty which belongs to the College.

Allow me also to draw your attention to the Act 3 Henry VIII., c. 11, which enacts that every person not holding your licence, except an English physician, renders himself liable to a penalty of £5 for every month he practices surgery in England and seven miles around London. Under this Act the action can be brought by an informant, and he shares the penalty with the Crown. I am, Sir, faithfully yours,

R. H. S. CARPENTER, Hon. Sec.

Edward Trimmer, Esq., Secretary, Royal College of Surgeons of England.

Royal College of Surgeons of England,
27th April, 1876.

SIR,—In reply to your further letter of this date, I have to acquaint you that I have my doubts as to whether the powers, to which you refer as being invested in the Council of this College, are still in force; but that I will make inquiry into the subject, and with this object will submit your letter of the 27th instant to the Council at their next meeting.

I am, Sir, your obedient servant,

R. H. S. Carpenter, Esq. EDWARD TRIMMER, Sec.

East London Medical Defence Association,
29th April, 1876.

SIR,—I am desirous to add to my former communication to you that our law books are clear and decided in their statements, that the penal clauses of the Charter and Acts I have referred to are still in force.

Some light is thrown upon the subject in a collateral way by the cases Gremaire *v.* Le Clerc Bois Valen, 2 Camp. 143; D'Allep *v.* Jones, 2 Jur. N. S., 979; and the note to Little *v.* Oldaker, Car. and M., 371.

I am, Sir, faithfully yours,

R. H. S. CARPENTER, Hon. Sec.

Edward Trimmer, Esq., Secretary, Royal College of Surgeons of England.

Royal College of Surgeons of England,
7th June, 1876.

SIR,—I have laid before the Council of this College your letters of the 22nd, 27th, and 29th ultimo, requesting on behalf of the East London Medical Defence Association that the Council, under the powers conferred upon the College by ancient Charters, will authorise the Association to prosecute in the name of the College certain unqualified persons for practising surgery, and will allow a portion of the penalties recoverable by the College to be retained by the Association; and I am desired to acquaint you that the Council, having considered your request, have resolved that, as they have not thought fit to institute any such prosecution as you suggest, they do not feel themselves justified in allowing any other persons to use the name of the College for the purpose.

I am, Sir, your obedient servant,

R. H. S. Carpenter, Esq. EDWARD TRIMMER, Secretary.

INDIAN PAY.

A. M. D. is anxious to learn what is the exact pay in India of a surgeon-major with twelve years' service, and what after fifteen years' full-pay service. Our correspondent states that, at present, surgeon-majors promoted by the recent Warrant after twelve years' service do not get £1 a day, as one would suppose on the first reading of the new rate of pay; they could only receive 17*s.* 6*d.* until after fifteen years' full-pay service; and our correspondent asks whether he is to conclude that the last rate of pay laid down is only to apply to six men to be promoted twelve years hence?

THE INTRODUCTORIES.

To the Editor of THE LANCET.

SIR,—The winter session of our medical schools is now rapidly approaching, when the usual introductory lectures will be delivered at most of them. As we are all aware, the "introductories" are not generally popular. They have partaken much too largely of a scholastic character. Would not the evidently declining interest in these annual addresses be revived if an "old student" of the hospital were occasionally invited to undertake this duty in the place of a member of the medical or the surgical staff, as is now customary. I am, Sir, your obedient servant,

Queen-square, W.C., Sept, 11th, 1876. J. FRENCH BLAKE.

*** The idea suggested by our correspondent is by no means a novel one, and has been already tried in one or more of our medical schools; but its success was far below what had been expected. We have little doubt that most members of the staff of our schools would willingly shift a somewhat disagreeable duty to other shoulders; but the difficulty of finding old students to undertake the task, who have the requisite professional standing, who are sufficiently *en rapport* with the feelings and aspirations of the students, and at the same time conversant with the ever-changing phases of modern medical studies, is a very great, if not an insuperable, objection to the carrying out of his suggestion.—ED. L.

Inquirens.—The water is greatly contaminated, and should not be used for domestic purposes. The chlorine is about eighteen times as much as is usually found in uncontaminated water. The ammonia also is considerable.

PRESERVATION OF LIQ. ATROPIÆ.

To the Editor of THE LANCET.

SIR,—I would recommend your correspondent who wishes to know how to preserve solution of atropine for ophthalmic use, to try the addition of one or two grains of chloral hydrate to each fluid ounce. This quantity will not be more irritating to the conjunctivæ than the atropine itself, and will probably be sufficient to preserve the solution. I would suggest, however, that he would find Savory and Moore's gelatine discs more convenient than solution. Yours faithfully,

September 19th, 1876. W. J. M.

FŒTUS IN FŒTU.

A LATE number of the *Boston Medical and Surgical Journal* contains a description of a remarkable monstrosity, which weighed about seven pounds. It consisted of the well-developed body of an acephalous child, containing partially within its mouth, nose, and fauces imperfectly developed portions of a twin fœtus, of which the member most perfect in development is the foot, which projects from the right nostril; while a ragged mass, a part of which was covered with healthily developed integument, presented the distinct form of a well-rounded shoulder. "The contiguity of the foot," writes the reporter, "suggests the possibility of its being part of the mates; but the form is so exactly that of the point of a shoulder that by no stretch of the imagination could it be assigned any other place in the attempted organism. Of the remainder, all that can be said is that it presents neither form nor comeliness." The specimen is now in the museum of the Harvard Medical School.

M.B.—Registrar, 315, Oxford-street.

ARMY MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—Now that the new Army Warrant has been offered to the profession, time has been allowed to get their opinion of its merits. It has, I think, proved a failure. There must be at least twenty-five more vacancies after the present batch of thirty-three men take their places; and allowing only fifteen more vacancies for the next six months, there must be forty appointments offered next February. The Government must feel that the profession responded to their call this time nobly. Twenty-five applied for the navy, and upwards of thirty-five, I believe, for the thirteen vacancies in the Indian (showing its popularity). Now, Sir, very little attention to the matter must convince the authorities that it is not sufficient to obtain a number of men for Netley, but that these men must be treated with fairness and good faith if they are to be retained and the service rendered effective, and by their good recommendation plenty of new recruits obtained. This can easily, I am convinced, be obtained by very little extra expenditure.

1st. Medical officers joining at Netley receive only 5*s.* a day, which requires no argument to show cannot even meet expenses. All the time they are there they must devote to the requirements of the service, and cannot engage in practice or augment their miserable pittance (hardly as much as is given to an unqualified dispensing assistant). This cannot be defended on any grounds. Many men have had, before passing the army examination, to spend six or twelve months reading and attending classes at considerable expense, besides the loss of income during that time. Therefore it must be acknowledged that the Government have had, though indirectly, the services of these men during that time, and for which they pay nothing. Can it be fair to offer doubly qualified men who have passed the State examination 5*s.* a day? Also, it must be remembered the Netley uniform costs about as much as the entire sum received there.

2ndly. Many medical officers would like to make the service their home; retirement after ten years ought to be optional, or, if not, dependent on the exertion and good work of the men.

3rdly. All pay should be definite, and calculated on the basis of lawful British money. I think, Sir, if Mr. Hardy were to take up the Warrant, he would be astonished to see it stated that 317 rupees a month was £31 odd. Of course many men who know nothing about the rates of exchange accept that statement as true, and as it has been placed there by men who knew otherwise, they have left themselves open to the grave charge of misrepresentation; and when this is found out by the unfortunate candidate, who believes he will in India receive about £370 a year, it will cause such an amount of mistrust that in the end it will act detrimentally to the service.

4thly. The term of foreign service is now (to begin with) half the entire length of the time the medical officer joins for. Could it not be reduced to three years, optional to remain on the five years, the like term of three years at home? This would give a slight advantage under the new Warrant, as medical officers would then receive the new pay of £350 before they would become entitled to promotion, and consequent increase of pay, under the old Warrant; but by giving them five years of Indian service on the old rate of pay (now worth much less), the offer of increase of pay is merely a snare, very much on a par with the statement that 317 rupees are equal to £31 odd. This statement cannot be defended, as the date of the document in which it appears is 1876. Relative rank carries with it advantages, and why should not a medical officer in the army obtain, on joining, the same rank as in the navy? The service ought to be in such a position as to secure good and efficient officers, and this can easily be done by attention to fairness.

I remain, Sir, yours &c.,

September, 1876. AN OLD RED-SEA FISH.

NAVAL MEDICAL SERVICE.

A CORRESPONDENT desires to obtain some information from those already in the service on the following points:—1. Is twenty-seven years of age too late to enter with advantage? and does a disadvantage, if any, follow throughout? 2. Entering at twenty-seven, what rank would probably be held after twenty-seven years' work? and what pension would he be entitled to after that service? 3. Can he live fairly well on his pay from the first, irrespective of the size of ship? 4. What is the cost of an outfit? 5. What extra cost for residence at Netley? 6. Is the service superior, as regards health and pay combined, to that of the Indian army?

SUGGESTIONS SUPPLIED.

To the Editor of THE LANCET.

SIR,—An irritation of the spinal cord or its membranes implicating the posterior nerve-roots frequently indicates itself by peripheral nervous manifestations, I would suggest to "Inquirens" that an examination be made of the spine of his patient, and in the event of any tenderness being present, to counter-irritate freely. If no such tenderness be found, gentle counter-irritation along the spine may be tried. The symptoms, so far as related by your correspondent, certainly appear to point to the spine as the seat of mischief.

Should the above suggestions be adopted, I shall feel obliged if "Inquirens" will kindly mention the result.—I am, Sir, yours &c.,

G. HUNTER MACKENZIE, M.D.

County Asylum, Gloucester, Sept. 18th, 1876.

ERYSIPELAS AND PUERPERAL FEVER.

AN American physician, with a large obstetric practice, lately reported several cases of puerperal fever. During a busy season he was called to see a case of facial erysipelas, and continued to attend his lying-in patients as usual. Immediately following the erysipelas case came eight cases of puerperal fever, six of which proved fatal. Another practitioner also relates that he had charge of a case of erysipelas of the great toe, going about his daily practice as usual. It so happened that he had a number of lying-in women at the time; three of them had puerperal fever, and died. The reporter states that he does not wish to discuss the identity of erysipelas and puerperal fever, but claims to assert that "facts are facts."

G. W.—Yes, if on the Register; but he cannot recover at law for surgical attendance.

TREATMENT OF SCIATICA BY AQUAPUNCTURE.

To the Editor of THE LANCET.

SIR,—The treatment of the following case was undertaken in accordance with the suggestion made in THE LANCET of the 4th March, 1876, by Mr. R. Clement Lucas. Just at the time I had this patient under my treatment, and seeing the miserable life he was leading from a chronic and obstinate attack of sciatica, I resolved to give him the benefit of this novel method. He was suffering from pain for a year and a half, extending from the sacrum down to the left foot. The tenderness was felt along the course of the sciatic nerve on the posterior aspect of the thigh, and diffused itself on the calf. There was no starting of the limbs or pain in the hip-joint; but on account of the rigid tension felt in stretching the limb he was obliged to walk in a stooping posture, so that the pelvis was distorted and rotated on itself, the spinous process of the diseased side being on a lower level than the other. His appearance indicated constant suffering, and the disturbance of nightly rest made his life a burden. There was no history of syphilis, and his general health was fair.

As no internal medicine or external embrocation produced any palliation of the symptoms, I commenced hypodermic injection of water on June 15th. I must premise that the treatment was not an unmixed one, inasmuch as it partly consisted of acupuncture along the course of the nerve on the posterior region of the thigh. On the first day three injections were used—one in the gluteal region, one in the thigh, and the third in the calf of the leg. In the first two the needle was carried deep into the tissues, and a syringeful of water was injected; and in the third, as the pain was superficially situated, the injection was simply hypodermic. That the needle had passed close to the nerve in the thigh was evident from the contraction of the muscles of the limb as the injection was being pumped in. I sent the patient away, with instructions to appear on the third day, when he reported the pain in the leg had completely disappeared, and the limb was more at ease. The same treatment was repeated three or four times at intervals, after which he had so far recovered as to be able almost to walk upright. He had better rest at night than he had enjoyed for a year, and felt himself grateful for the palliation of his symptoms. Before injecting the water, I used to exhaust the cavity of the syringe with a view to ascertain if any fluid could be sucked in, but I never found anything except a few drops of blood. The relief could not have been due, therefore, to any letting out of fluid from the sheath of the nerve, to which the advocates of acupuncture in sciatica ascribe the benefit. The patient is still under treatment, and confesses that the injection has relieved more than half of his painful symptoms.

Yours truly,

September, 1876. GOPAUL CHUNDER ROY, M.D., &c.

X. Y. Z., (Bournemille.)—Etudes Cliniques et Thermométriques sur les Maladies du Système Nerveux (Paris, A. Delahaye), and some of the earlier numbers of *Le Progrès Médical*.

Layman.—We know nothing of such a bequest. Our correspondent had better communicate with the Government Office.

A HAIRLESS HORSE.

To the Editor of THE LANCET.

SIR,—There is at the present time on view at the Alexandra Palace a perfectly *hairless horse*, named "Caoutchouc." His height about 15·2, compact build, and healthy-looking. The skin is black and shiny, and not a vestige of hair to be seen anywhere. Near the nostrils are two or three dilated hair-follicles; but the keeper says not even a single hair has ever been seen. Where the mane usually is are one or two places where hair has apparently tried to make its exit; but it is stated on the "handbills" that microscopic investigation has failed to find a trace of any. He was captured six years ago in Queensland, Australia, from a herd of wild horses on account of his peculiar appearance and india-rubber-like skin. He perspires freely when exercised, and is capable of great exertion. The hoofs are large, rather out of proportion to his size; the upper eyelids are double, and this is imagined to act as compensation for the absence of eyelashes. At first sight one is inclined to fancy that the animal has been cleanly shaved, but on close inspection, and from the peculiarities of the eyelids &c., which I have mentioned, there can be no doubt that he is a genuine curiosity, and will thoroughly repay any of your readers who takes an interest in such freaks of nature, and they can then judge for themselves.

Several years ago a somewhat similar horse was exhibited in the provinces. Speaking from memory, this one had very thin hair, if not actually deficient, in some parts. The colour was bluish or slate grey, and was looked upon as a case of "maternal impressions," as its mother when in foal with it was supposed to have been frightened by an elephant, the skin of which it somewhat resembled.

The case I now enclose must be put down to the same cause, I should imagine.

I am, Sir, yours obediently,

F. OTLEY LOVELL, M.R.C.S.

Alexandra-road, St. John's-wood, Sept. 4th, 1876.

SALICYLIC ACID.

To the Editor of THE LANCET.

SIR,—I should feel obliged if either you or one of your readers would explain the following:—Wishing to make a solution of salicylic acid, I dissolved twelve grains in about half a drachm of spirit, and added two drachms of water, when, to my astonishment, it immediately became solid. I should like to know the cause of such a change.—Yours &c.,

September 19th, 1876. A STUDENT.

MEDICAL AMENITIES IN EMERGENCIES.

To the Editor of THE LANCET.

SIR,—Will you kindly tell me what you think of the following conduct? A short time ago, an old gentleman, residing twelve miles off, was shot by his butler, and died soon afterwards; the murderer then shot the old gentleman's daughter in the hip. Of course medical men were sent for in all directions at once. The nearest, four miles off, was there very soon, but was not the usual attendant. The family attendant resides in this town, but was not at home, so his assistant partner went. I arrived soon after him, having gone the distance of twelve miles in fifty minutes. The two who were there first attended to the injuries of the unfortunate lady, which were very severe, without even asking me to come into their counsels. After remaining there two hours, I departed, without having seen her. Even if the injuries were of a trivial nature, I should have thought that, out of common courtesy, they would have asked me to join in looking at the case.

I remain, Sir, yours truly,

JOSIAH WILLIAMS, L.R.C.P.

Avonside House, Llandovery, September, 1876.

*** We agree with our correspondent, always supposing that his statement of the facts is accurate. Such tragedies as he describes constitute occasions when medical men are thrown unceremoniously into relation with each other. In the interest of the patient, consultation, in the first instance, is most proper. It is equally proper as an exhibition of professional courtesy and harmony. What could on-lookers think of a medical man who had ridden twelve miles in hot haste being kept waiting two hours, and then allowed to leave without seeing the patient, or, as we gather, the medical men who had arrived previously. Medical men generally act alone, without relation to their professional brethren. When circumstances throw them together, there is a most imperative duty of mutual courtesy and deference. —ED. L.

ANOTHER MONSTROSITY.

To the Editor of THE LANCET.

SIR,—Reading the interesting account of the double monstrosity which Dr. Tweedie had the unpleasant duty of assisting into the world a few weeks ago, reminds me of a singular case which happened to myself about eighteen months since.

I was called to confine a lady, and after a short stay delivered her of an acephalous monster, whose body and extremities were well developed, but whose head upon examination showed a complete absence of the frontal and parietal bones, together with the cerebral matter. Owing to this, and also from the ears hanging forward, and the projecting eyeballs with no orbital ridges, the appearance of the features exactly resembled a toad. A mass of congealed and congested tissue covering over the base of the skull gave me the impression that the absent portions had been developed, and became subsequently absorbed, through a frightful nervous shock which the patient had received in her sixth month, through finding her servant dead in bed one morning when she had gone up to call her, after repeatedly ringing in vain for her to rise.

The monstrosity lived about five minutes, and is now to be seen in spirits at the College of Surgeons' museum.—I am, Sir, yours &c.,

Gloucester-road, Queen's-gate, Sept., 1876. J. MESSITER LANG.

COMMUNICATIONS not noticed in the current number will receive attention in our issue of the ensuing week.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Maunder, London; Dr. Blandford; Inspector-General Smart; Mr. Goodall, Bath; Messrs. Smith and Son, Manchester; Mr. Loveday, Worthing; Dr. Taylor, Nottingham; Mr. Holden, Liverpool; Mr. Riddell, London; Dr. Blanc, Bombay; Mr. Reilly, Hackney; Dr. Longhurst, London; Dr. Mackenzie, Gloucester; Dr. Goolden, London; Dr. Deville, Harrogate; Mr. Wylie, Belfast; Messrs. Porteous and Co., Glasgow; Mr. Crookshank, London; Mr. Hare, London; Mr. F. W. Wright, London; Mr. Lamsden, Ventnor; Dr. O'Neill, Lincoln; Dr. Waller, Peterborough; Messrs. Grindley & Co., London; Mr. Knott, London; Mr. Druce, Northampton; Mr. Foster, London; Mr. Clegg, Everton; Mr. Sutton; Mr. Gaillard; Mr. Piggott; Mr. Harris; Mr. Bray, Caterham; Mr. Pratt, Wiveliscombe; Dr. Brown; Mr. Gateling, Woodford; Mr. Bridge; Mr. Wright, Stamford; Mr. Lund, Manchester; Mr. Ralph, Diss; Mr. Calmon, Penrith; Dr. Simpson, Highgate; Dr. Wilkinson; Mr. Taylor; Mr. Arch; Mr. J. Chalmers, Rotherham; Dr. Hemming; Mr. Sharp, Culling; Mr. Nuttall, Leicester; Dr. Baxter; Mr. Davies; Dr. Hooper; Dr. Forbes; Layman; Anxious; An Old Subscriber; M. B.; A very Old Subscriber of THE LANCET; F. P. C.; Inquirens; G. W.; F. G.; T. R.; B.A., M.D.; R. R.; W. P. K.; A Student; R. M.; Fair Play; W. J. M.; Medicus, Hull; W. J.; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from — Mr. Knight, Rotherham; Mr. Merryweather, Guisborough; Mr. Haydon, Holbrook; Messrs. Boulton and Paul, Norwich; Dr. Taylor, Glasgow; Mr. Johnston, Glasgow; Dr. Dowse, Highgate; Mr. Wall, Wigan; Mr. Eastwood, Blackburn; Mr. Russ, Wells; Dr. Brown, Hastings; Mr. Jones, Towyn; Mr. Kemp, Castleford; Mr. Worger, Radstock; Mr. Walker, Wakefield; Dr. Hebblethwaite, Bawtry; Mr. Pascal; Mr. Williams; Dr. Lawson, Lancaster, U.S.A.; Mr. Elliott, Manchester; Mr. Evans, Llandovery; Dr. Huntly, Brighton; Dr. Rigby, Preston; Dr. Webb, Wirksworth; Mr. Curwen, Workington; B. J., Upholland; T. K. D.; Viola; Medicus, Edinburgh; L. R. P.; Medicus, Ivy Bridge; A. C., Plymouth; M. E., Oldham; E. S.; Sigma, Norwich; Medical; Medicus, Llandovery; A. B., Landport; Medicus, Denbigh; M.R.C.S., Honiton; M.D., Bournemouth; A. B., Sheffield; C. W. M., Campden; T. A., Preston; C. S. Z.; Medicus; Sigma.

Midland Free Press, Western Morning News, Manchester Guardian, Newcastle Chronicle, Cork Constitution, Liverpool Post, East London Observer, Galloway Times, Shrewsbury Chronicle, Tunbridge Wells Gazette, Surrey Advertiser, Blackburn Times, Buxton Advertiser, and *Northampton Herald* have been received.

METEOROLOGICAL READINGS

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, SEPT. 21ST, 1876.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radia. in Vacuo	Max. Temp. Shade	Min. Temp.	Rain-fall.	Remarks at 8 A.M.
Sept. 15	29·80	N.W.	50	52	87	65	49	...	Foggy
" 16	29·68	S.E.	53	54	90	63	48	0·11	Raining
" 17	29·76	N.W.	55	61	95	67	50	0·06	Cloudy
" 18	29·89	W.	55	59	105	68	50	0·12	Cloudy
" 19	30·26	W.	53	55	98	68	50	...	Cloudy
" 20	30·40	N.W.	52	54	90	76	49	...	Foggy
" 21	30·28	S.E.	50	52	92	88	48	...	Foggy

Medical Diary for the ensuing Week.

Monday, Sept. 25.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

Tuesday, Sept. 26.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, Sept. 27.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1½ P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

Thursday, Sept. 28.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

Friday, Sept. 29.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Sept. 30.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

NOTICE.

In consequence of THE LANCET being frequently detained by the Post Office when posted for places abroad *more than eight days after* publication, subscribers and others are reminded that such copies can be forwarded only as book packets, and *prepaid* as such.

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